

July 11, 1974

MEMORANDUM TO: E.S. Nuspliger
The Society of the Plastics Industry, Inc.

SUBJECT: BNA Coverage of OSHA Hearings

A brief tabulation of the coverage of the OSHA hearings in the BNA Occupational Safety and Health Reporter strongly suggests that SPI acted quite wisely in its decision to cooperate fully with the press vis-a-vis the distribution of the Arthur D. Little data, the "position" press release, and complete copies of the SPI testimony.

Of 111 1/4 column inches of coverage in the June 27 and July 4 issues of the Reporter, SPI accounted for a full 62 inches, or more than 55 percent of the total. Dr. Selikoff, on the other hand, earned only 6 3/4 inches, OSHA 7 3/4, and NIOSH 8.

The June 27 issue, which covered only the first day of hearings, carried 6 3/4 inches of SPI testimony, based solely on the "position" press release. SPI, as you know, did not testify on the first day and had it not been for the "early" distribution of the press release, would not have been included at all. Instead, SPI earned the lead in the subsequent article. The July 4 lead was also based on SPI testimony.

As a comparison, DOW, whose testimony and cross-examination lasted approximately six hours, received only 4 1/4 inches of coverage, largely because DOW did not make copies of its presentations available to the press.

Not included in the above calculations is an 11 inch story in the June 27 issue on the A.D. Little findings. This story was based on the SPI press release of June 20.

We believe the above comparisons demonstrate the advantages that accrued to SPI as a result of its decision to place its story in the hands of the press at the earliest possible moment.



Matthew M. Swetonic

CC: R. L. Harding, J. Lawrence, J. Kiss, Jim Moore, T. McGrath
D. White, J. Blizin, W. Durbin, C. Thompson, J. Callaghan

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POOL NEWS
LOS ANGELES, CALIF.
SEMI-MONTHLY \$8,000

JUL 1 1974



Inside the Industry

— By Fay Coupé

The PVC Dilemma: How Safe Is Safe Enough?

A frightening story is emerging from the plastics industry, a story which we touched on briefly last issue. There appears to be incontrovertible evidence that a rare form of liver cancer is linked to vinyl chloride gas, which is used in the making of polyvinyl chloride, which is used in the pool industry (among many, many other industries) for vinyl liners, PVC pipe and molded fittings, etc.

An Italian cancer research scientist was the first to discover the connection between angiosarcoma and the presence of vinyl chloride gas, under a study initiated by a European chemical firm.

According to a story in *Chemical & Engineering News* May 20, 1974, Prof. Cesare Maltoni found the rare form of liver cancer in rats which breathed air containing 250 parts per million of vinyl chloride. At the time (August 1972), U.S. Occupation Health and Safety Administration regulations permitted concentrations of 500 parts per million.

The present level permitted by OSHA is 50 ppm, but Labor Department hearings are under way as this is being written to rule on OSHA's recommendation that the standard be changed so that "no detectable level" of vinyl chloride be allowed.

According to plastics industry spokesmen, such low levels would be impossible to obtain. The Society of the Plastics Industry is reported by the *Wall Street Journal* (June 25, 1974) as saying, "Sufficient technology doesn't exist to meet the proposed standard and (the society) warned that much of the vinyl and polyvinyl chloride industry might have to close if the standard goes into effect. The society predicted that 1.6 million jobs and 'at least \$65 billion' in sales and production could be lost."

However, according to the June 27 *Los Angeles Times*, the powerful AFL-CIO has told the Labor Department hearings that they recommend the "no detectable level" limitation, even if it means the loss of their jobs.

An AFL-CIO spokesman was quoted as saying, "We've lived without polyvinyl chloride for thousands of years. We can exist without it again, if we have to."

The plastics industry is pressing for a less stringent standard, plus more time to phase in the new controls.

What conclusions can be drawn?

First of all, it seems highly unlikely that the Labor Department will set a standard which would wipe out 1.6 million jobs — or anything approaching that figure. Nevertheless, there are very powerful forces supporting the proposed change, so we would expect some kind of compromise between the "no detectable" level sought by OSHA, organized labor and consumer groups and the current 50 ppm level — possibly at the 5 or 10 ppm level that some have suggested is reasonable.

This has to mean that PVC, already scarce and skyrocketing in cost, is going to become even scarcer and costlier.

Are there any health hazards to people in the industry working with PVC?

There have been absolutely no suggestions, so far, that there is any danger involved in handling a finished product of PVC, whether it be film, pipe or molded.

The primary hazard clearly exists in the process of converting the raw feedstocks of vinyl chloride into resin, while the compound is still a monomer. An industry source tells us that the resin is then polymerized, a process in which plasticizers, elasticizers, binders, etc. are added at very high temperatures, with the resulting material extruded in various forms — a common configuration being the PVC pellets which are used in injection molding.

However, said the plastics expert, if the polymerization is not complete, for whatever reason, it can happen that some vinyl chloride monomer may be trapped in the PVC. If, at the next point in the fabrication, very high temperatures are used to process the raw PVC, these trapped monomers could be released into the atmosphere, thus posing a health hazard to workers in the area. This would appear to be the linkage between two PVC workers whose deaths have been traced to angiosarcoma.

The moral questions which are raised are disturbing. How safe is safe enough? How many deaths from angiosarcoma are acceptable? Ten a year? Or a hundred? Or none? Is any expense justifiable — and remember we're talking about billions of dollars — if it saves a life, or lives?

It's the same question, in essence, that the Consumer Product Safety Commission official spoke to, in the story beginning on page 1, in which he said, "We can't take a 10-cent item and make it cost \$10 just to make it work" — and we assume he meant, make it work safely.

The answer, no doubt, lies somewhere between total idealism and total indifference to anything but profit.

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JUN 20 1974

B. J. J. J.

OSHA Issues Temporary Guides on Vinyl Chloride

WASHINGTON (FNS) — The Labor Department Wednesday issued stringent inspection guidelines for plants using vinyl chloride as the plastics industry, in a scathing attack, assailed the agency's proposed new health rules covering the chemical.

The Society of the Plastics Industry charged the new regulations proffered by the department's Occupational Safety & Health Administration to offset carcinogenic dangers could throw 1.6 million employees out of work and cost \$65 billion in lost sales and production.

OSHA's proposed new standard, which would cut the air content of vinyl chloride in plants to a "no detectable level," is "infeasible to achieve, even with the highly sophisticated methods of in-plant control that have been developed by the industry," SPI insisted.

CHEMICAL AND
ENGINEERING NEWS
WASHINGTON, D. C.
W. 115,000

JUL 1 1974

B. J. J. J.

Hearings under way on vinyl chloride rules

The Occupational Safety and Health Administration opened public hearings last week on the agency's proposed permanent standard to reduce worker exposure to vinyl chloride to a "no detectable level." The hearings promise to be long and acrimonious. There are 89 scheduled panels of witnesses, and questioning is permitted.

A lead-off witness for the Society of the Plastics Industry, Anton Vitone, president of B. F. Goodrich Chemical, argued that there are "no data showing that exposure levels as provided under the emergency standard [50 p.p.m.] are not

safe and of a low degree of risk." He said that "the proposed permanent standard is not technologically feasible and, if adopted, would shut down the industry." SPI estimates that this could result in the loss of 1.7 million to 2.2 million jobs and a loss of domestic production value of \$65 million to \$90 million annually.

In place of OSHA's proposed permanent standard, Mr. Vitone proposes a stepped reduction for worker exposure in polyvinyl chloride resin plants that would lower the ceiling to 40 p.p.m. this year and to 25 p.p.m. by late 1976. His proposed standards for monomer plants are a ceiling exposure of 25 p.p.m. for 1974 and of 10 p.p.m. for late 1975.

However, United Rubber Workers president Peter Bommarito told the hearing that the "Government's goal of 'no detectable level' for vinyl chloride is both necessary and feasible." Characterizing the indus-

The new standard will be the subject of hearings in user industries are expected to echo SPI's warning that polyvinyl chloride resin-producing industries will be forced to close down immediately, if the standard is adopted. Nearly 80 organizations are for the temporary standard, issued April 5, which limits permissible employee exposure to 50 parts of the chemical per million parts of air.

Meanwhile, OSHA's inspection "guidelines" under these new guidelines, which are retroactively to April 22, inspectors finding violations will issue them a citation — and in some cases "the alleged violation will be considered as serious," OSHA said.

try prediction of blackmail, Mr. Vitone said that although older plants might justify major expenditures, "newer plants have a characterizing ability, to do the job." The labor position drew support from a draft statement prepared by the Department of Labor, which contains evidence to date that "no evidence of the standard will stop vinyl production and use."

What effect the hearing will have on OSHA's final permanent standard remains to be seen. But Daniel Boyd, director of the office of standards development for OSHA, said that in preparing the final standard, which must be set by Oct. 5, OSHA would consider the availability and technology.

Plastics Industry Mobilizes to Thwart Tough Rules on Handling Vinyl Chloride

By WALTER MOSSBERG

Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON — As the federal government moves closer to adopting stringent controls over handling of the ubiquitous industrial chemical vinyl chloride, manufacturers who use it are mobilizing to try to show that the controls would prove economically disastrous.

The rules would be utterly unworkable, the companies say, and industry would lose an essential manufacturing material. In consequence, they add, makers of plastic pipe, auto parts, phonograph records and many more products would be driven to the wall. And, they contend, thousands of jobs would vanish.

This gloomy picture is likely to dominate Labor Department hearings, beginning today, on planned standards for eliminating the exposure of plastics-industry workers to the chemical, which is suspected of causing cancer.

Exposure to vinyl chloride, a gas, has been linked by researchers to 19 cases of a rare liver cancer, angiosarcoma, among workers handling it in the U.S. and other countries; in 16 of these cases, death resulted. In addition, angiosarcoma has recently been blamed for the death of two employees in U.S. plants handling polyvinyl chloride, the powdered derivative of vinyl-chloride gas that is fabricated into a wide range of plastic products. (Two other deaths from angiosarcoma have been discovered among people living in the vicinity of plants using polyvinyl chloride.)

In April, the Labor Department's occupational safety and health administration imposed a temporary emergency standard limiting workers' exposure to vinyl-chloride gas to 10 parts per million in the air they breathe. A sharp reduction from the previous limit of 500 parts. Now, the agency is proposing—and witnesses at this week's hearings will debate—a standard cutting exposure permanently to "no detectable" level at all.

Although the plastics industry opposed the emergency ruling, its voice has so far been weaker than that of organized labor and various scientific groups, which back the tough rules.

Doom for the Industry?

At this week's hearings, however, the industry is expected to argue strongly that the "no-detectable" exposure plan would spell doom for the several dozen plants that make vinyl chloride gas or turn it into polyvinyl chloride powder or resin, and for most of the hundreds of plants that turn polyvinyl chloride into plastic products.

The standard would require that most operations in the production of vinyl chloride and polyvinyl chloride, which employs an estimated 60,000 workers, be conducted in closed-off, regulated areas where exposure can be controlled by ventilation devices or other methods. In addition, some 1,000 of the plants that turn polyvinyl chloride into products, which are said to employ up to 1,000,000 workers, would be subject to the far stringent engineering rules of these operations. Such rules would require the physical removal of powder or resin to a place trapped quantities of new vinyl chloride gas.

Last week the Society of the Plastics In-

dustry, a trade group, asserted that sufficient technology doesn't exist to meet the proposed standard and warned that much of the vinyl and polyvinyl chloride industry might have to close if the standard goes into effect. The society predicted that 1.6 million jobs and "at least \$65 billion" in sales and production could be lost.

Ralph Harding Jr., president of the society, said that the proposed standard "is technologically infeasible to achieve, even with the highly sophisticated methods of in-plant control that have been developed by the industry over the years. If the proposed 'no-detectable-level' standard is adopted, the vinyl chloride and polyvinyl chloride resin producing industries will be forced to close down immediately."

The Labor and Health View

A number of labor-union and occupational-health experts are expected to dispute the society's claim at the hearings. They contend that it is possible to meet the standard without closing the industry.

But harsh predictions are contained in many of the more than 125 letters from plastics firms already on file with the Labor Department. The letters, representing the writers' formal "comments" on the planned rules, give an indication of the probable tone of this week's hearings. Although most letters concede that some controls are needed on vinyl chloride, most contend that the proposed measures would mean nothing less than the collapse of their industry.

Almost all the letters come from users of polyvinyl chloride, or PVC, and not companies directly handling vinyl chloride itself or those turning it into PVC. In most cases, they explain that their suppliers of PVC have told them the standards will make it impossible for them to continue producing the raw plastic. Urged to write to the government, the PVC users have done so, forecasting their financial ruin.

"Unless a reasonable approach is taken," wrote Frank Groeneveld Jr., president of a plastic-pipe-extruding firm in Florida "it could mean the destruction of many small businesses such as ours where we have invested our life savings."

R. J. Clayton, chairman of Louver Drape Inc., a California maker of PVC window blinds and folding doors, wrote that "37 years ago, at the depth of the depression, I started a one-man business which has grown today where we do approximately \$7 million worth of business and employ over 250 people." If the new rules are imposed, he said, "we'd be back to a one-man business overnight."

One firm, Custom Trim Products Inc., which makes plastic trim for several big auto makers, warned that the new rules could cut off its supply of PVC resins, ending its production and causing it to risk lawsuits by Detroit for failure to fulfill supply contracts. The firm, an officer wrote, "would undoubtedly be forced into bankruptcy."

Hubbard Apiaries, a beekeeping company in Onsted, Mich., wrote to declare that it couldn't remain in business if PVC supplies were threatened because its honey is sold in PVC bottles and glass bottles are scarce as a result of a soda-ash shortage.

In fact, many of the letters contended that PVC is already in short supply, highly versatile and absolutely necessary for a variety of important uses.

Spokesmen for the record industry insisted that the plastic is vital to its operations. MCA Records Inc. contended that if the standards forced PVC production to end, "our industry would be forced out of business."

The National Association of Home Build-

ers said the standards could drive the rising costs of housing even higher by forcing builders to abandon economical PVC housing components. It warned that such a development could mean "severely needed housing would be beyond the reach of an increasingly large segment of the public."

Norton Co.'s plastic and synthetics division, which makes tubing for medical uses, warned that if the new rules curbed supplies of PVC, desperately needed equipment used in kidney dialysis and heart surgery might become unavailable. And Greenville Co. of Greenville, S.C., a maker of fire-retardant, flake and test material, called PVC "the most important component" in its products.

White Corp., Arthur C. Co., a Florida plastic executive, and Donald K. Co., an officer of an Ohio plastic company, urged modification of the proposed standards on the grounds that they themselves had had long personal exposure to vinyl chloride without ill effects.

Most of the letter writers acknowledged the need to protect workers from the possibility of liver cancer. But they urged delay in imposing such harsh restrictions, both to give scientists time for further research and to allow the businesses to adjust to the new standards.

But one writer took a decidedly less sym-

pathetic view of the dangers of death from vinyl chloride. Jameson Crane, of Crane Plastics Inc., in Columbus, Ohio, wrote, "We continue to be impressed with the comparison of the number of deaths annually due to suicide prompted by loss of jobs, versus the 19 angiosarcoma deaths world-wide over 35 years of PVC production."

What's ahead for vinyl makers: Slowdown or end of the road?

Uncertainty beclouds industry as OSHA weight testimony on proposal for sharp cut in VCM emissions within plants

Scores of chemical and plastics companies will be on tenterhooks during the next few weeks or months while Secretary of Labor Peter Brennan and his associates are deciding what safety standards will be required in U.S. plants that produce vinyl chloride monomer, process it into polyvinyl chloride resins and mold those resins into plastic pipe, phonograph records, sports car tops and vinyl flooring.

The immediate question: How much VCM gas should be permitted as an air contaminant in all those plants? Until this question is resolved, management people in this \$65-billion/year business will not know whether to invest additional capital in plant expansion, research and marketing programs. Moreover, their suppliers will not be able to project how much ethylene, chlorine, plasticizers and molding equipment will be needed.

In last week's public hearing in Washington, it became clear that this vinyl factory hygiene matter has become the biggest and most controversial case that has yet been faced by the Labor Dept.'s three-year-old Occupational Safety and Health Administration. Because some vinyl plant workers have contracted a rare and fatal cancer of the liver (angiosarcoma), OSHA in April issued a temporary regulation that the VCM concentration in the air in such plants must not exceed 50 parts per million. Now the agency is proposing as a permanent rule that the limit be set at "no detectable level," which in practice would mean a maximum of only about 1 ppm.

Costs, Jobs, Health: Such an "excessively and unrealistically restrictive" standard is not technologically feasible, and its adoption "would shut down the industry," according to Anton Vittone, president of B. F. Goodrich Chemical Co. and chairman of a special PVC standards committee set up by the Society of the Plastics Industry.

As the industry's principal spokesman at last week's hearing, Vittone proposed that the present temporary emergency standard of 50 ppm. for PVC plants be lowered in several stages to 25 ppm. by Oct. 5, '75, with further imposition of a time-weighted average limit of 10 ppm.

Standards for VCM production, he said, could be more restrictive—10 ppm. by Oct. '75, and a time-weighted average maximum of 5 ppm.

Meeting these suggested standards would be costly and difficult, Vittone said. "These proposals represent ambitious, difficult levels of operational exposure dependent on large expenditures of money, reduced capacity, and the development of technology not currently in hand."

But trying to meet the no-detectable-level standard would be prohibitively expensive if not impossible, he warned. Putting OSHA's proposed regulation into effect, he added, "could displace not only the 6,500 VCM and PVC production workers but also hundreds of thousands of other employees in companies that use PVC."

Cutbacks and Renovation: A contrary view was presented in a Labor Dept. report asserting that the no-detectable-level standard's only over-all impact on the PVC industry would be curtailed production. The report's authors conceded, however, that some "marginal" companies might need federal loans to finance the plant alterations necessary to meet the more stringent standard.

That standard was defended at the hearing by Daniel Boyd, director of OSHA's Office of Standards Development—where OSHA staff members will analyze the exhaustive and conflicting testimony given by the 147 scheduled witnesses during the five-day hearing.

Boyd emphasized that he regards the no-detectable-level standard as only a proposal, but added: "It represents our best judgment based on the information available to us on May 10. We do not claim to know all the answers to all the problems associated with employee exposure to VCM. I am . . . asking for your help, your input, so that we can promulgate a standard based on the best and most recent information available."

Gas Masks, Chromatographs: Under the Labor Dept.'s proposal, the first step for employers would be to reduce VCM emissions by adopting new engineering controls and production methods "as soon as feasible." Boyd explained that



OSHA'S BOYD: 'As soon as feasible' will depend on cost and available technology.



SPI'S VITTON: No-detectable-emission standard 'would shut down the industry.'



URW'S BOMMARITO: 'The medical facts are in, and the problem is now political.'

CHEMICAL
ENGINEERING
NEW YORK, N. Y.
E. O. WEEK 63,020

JUN 24 1974

NEWS FEATURES . . .

VCM-Exposure Standards: Too Tough Too Soon?

After virtually ignoring industry's findings on cancer risk for a decade, the U. S. government is now calling for zero-detectable ambient levels of vinyl chloride monomer (VCM) in plants that make or use it. At hearings this week, some clashes are expected as industry tells why it thinks the timetable should be extended.

Hearings begin tomorrow—June 25th—in Washington on just what level of exposure to vinyl chloride monomer (VCM) can be tolerated by workers without seriously endangering their health. Once again, and ironically in this instance, a clash between government agencies and industry seems inevitable.

The Occupational Safety and Health Administration (OSHA) proposes to set a standard for employee exposure at "zero," as determined by a sampling and analytical method capable of detecting vinyl chloride in concentrations of 1 ppm (with an accuracy of ± 0.5 ppm).

OK, But . . .—VCM manufac-

turers are not basically opposed to reducing exposure levels as much as possible—for example, B. F. Goodrich Chemical Co. (the U. S.'s largest vinyl chloride producer) now operates at levels of about 15 ppm in its polymer plant, and even lower in its monomer facility. What bothers manufacturers is having to achieve, in a telescoped time-period "no detectable level of exposure."

As a Goodrich spokesman explains, "The situation we're facing with vinyl chloride exposure levels is not dissimilar to the zero pollution legislation for controlling water pollution—the final last percentage points are achievable only at enormously high costs."

The irony of this particular situation is that producers of vinyl chloride voluntarily alerted the government of the chemical's involvement in several deaths from liver cancer (angiosarcoma).

In fact, over 13 years ago Dow Chemical Co. reported that longterm VCM exposures of animals to 100 ppm VCM, for 4½ to 6 mo. (at the equivalent of "normal working hours") resulted in slight liver damage. At that time, Dow recommended that exposure levels be reduced to 50 ppm, though the government's maximum allowable concentration was 500 ppm. The Dow recommendation was not accepted by the American Conference of Governmental Industrial Hygienists (ACGIH). In 1962, on the basis of work done at Yale University, ACGIH concluded that 500 ppm offered an adequate safety margin for human exposure to VCM, and published 500 ppm as the recommended standard. That same level was also accepted by OSHA as a national standard in 1971.

However, beginning in the mid-1960s, the Manufacturing Chemists Assn. funded an investigation of the possible health dangers involved in VCM manufacture. In mid-1972,

MCA established technical liaison with European researchers who were also investigating the safe-exposure limits of VCM.

One decision by MCA arising from this agreement was to initiate an epidemiological study of VCM/PVC (polyvinyl chloride) workers in the U. S. And in early 1973, MCA signed a contract with Industrial Bio-Test Laboratories, Inc. (Northbrook, Ill.)

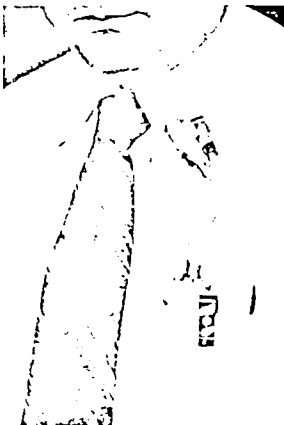
In late June 1973, MCA requested a meeting with the National Institute for Occupational Safety and Health; this was arranged for July 17, 1973. A summary of the published toxicity data on vinyl chloride, and other pertinent information, was presented to NIOSH at that time. A physician representing the European researchers reported at the meeting on studies in Europe in which tumors were observed in rats at exposure levels as low as 250 ppm.

Six months later, in January 1974, B. F. Goodrich Chemical Co. informed NIOSH that the deaths of several of its employees from angiosarcoma might have been occupationally related. In the succeeding months, similar reports were made to NIOSH of possibly job-related liver angiosarcoma by Union Carbide Corp., Goodyear Tire & Rubber Co. and Firestone Plastics Co.

In early April, OSHA acted and issued an Emergency Temporary Standard that reduced exposure levels from 500 ppm to 50 ppm, with the understanding that this new standard was to be in effect only until October while the whole question of VCM exposure safety levels was explored more closely.

Timetable Too Fast?—Despite what seems to be a long history of self-investigation and concern by the vinyl chloride industry, this week's scheduled hearings in Washington are expected to spark some clashes. The industry is deeply concerned about the possible economic impact

Photo America's J. Signe Co.



DEVICE measures VCM exposure by drawing air through sorbent tube

of a "no detectable level" being established immediately.

In an effort to assess what the costs might be, the Soc. of the Plastics Industry, which is expected to participate in the hearings, has hired Arthur D. Little, Inc., the Cambridge, Mass., consulting firm, to prepare an economic impact survey.

Even the unions concur that economic hardships for workers could result from the proposed standard. However, as Anthony Mazzocchi, legislative director of the Oil, Chemical and Atomic Workers Union (which represents about 1,200 VCM/PVC workers) notes, "The men at Niagara Falls [where Goodrich has a plant] are caught. They're in a dilemma. What's their option? Work and eat today so they can die 20 years from now?" (Goodrich says the morale of its workers is good—men are still applying for jobs on its vinyl chloride line.)

What's Being Done—Simply stated, there are two major areas of concern in a VCM plant—ambient air containing vinyl chloride monomer particles, and the need to periodically enter the reactor vessels for cleaning. Research has indicated that the workers who clean the polymerization reactors by scraping are exposed to VCM concentrations of 600 to 1,000 ppm at hand level.

One monitoring device being looked at with interest is a personal sampling pump, manufactured by Anatole J. Sipin Co. (Although area-monitoring instruments have the advantage of immediate detection, they may not measure exact working conditions.) The Sipin device continuously draws an air sample from a worker's breathing zone through a sorbent tube over an 8-hr working day. April of the organic materials breathed by a worker. The personal sample pump was looked at with interest by some Cincinnati-based NIOSH personnel at a meeting on monitoring for VCM, held in Houston.

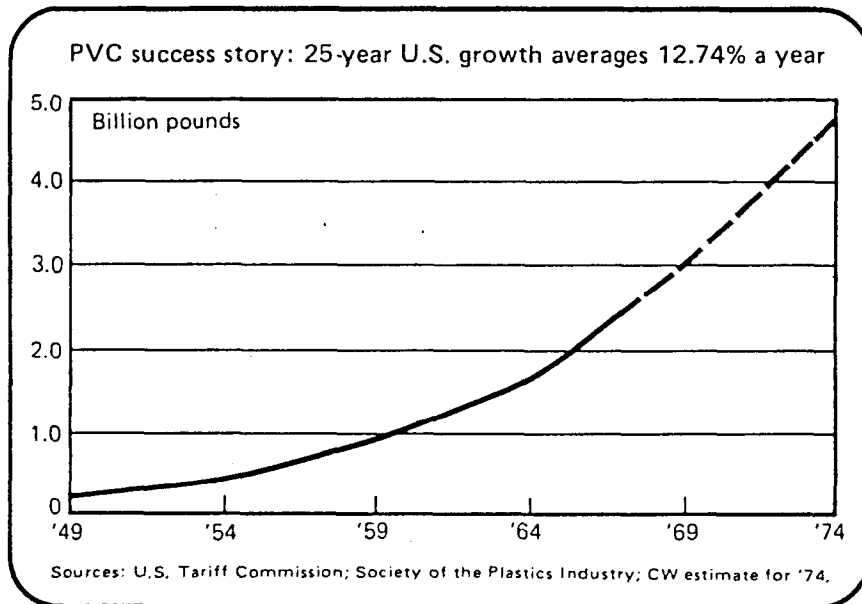
As for reactor cleaning, GAF Corp. has developed a system whereby a solvent, trademarked M-Pyrol (n-methyl-2-pyrrolidone), is pumped through the heating unit and sprayed into the reactor to be cleaned. When about one-quarter full, the reactor is shut off and the

solvent recirculated. The heavy spray of hot solvent absorbs the vinyl chloride monomer and, at the same time, dissolves the PVC residue.

Although PVC itself is considered an unusually inert material, residual monomer can be entrapped within the pores of the polymer. Up to now, the industry has not made it a practice to strip the residual monomer from the polymer. However, work is

now underway to develop the required technology. Experts say that the residual monomer could be dropped by dilution with compounding agents and by the mixing action during such compounding.

Goodrich, for one, is already exploring possible approaches to removing the residual monomer, and plans to set up a pilot operation soon.—JMN



feasibility refers to both technological and economic considerations: "On the one hand, does the technology exist that would allow the employer to achieve compliance? And on the other, What are the costs associated with the application of these technologies?"

If the very low level of VCM concentration could not be attained immediately, employees would be required to wear air-filtering devices known as continuous-flow and demand respirators. Commented Boyd: "We recognize that respirators are not popular with employees and that employees may have difficulty wearing them 40 hours a week. However, in balancing the feasibility of engineering controls and work practices, respirators and the hazards associated with VCM, we feel that respirators are a necessary temporary means of avoiding employee exposure to VCM."

As to in-plant monitoring, OSHA shied away from designating any specific techniques for measuring VCM concentration in the air. "But a gas chromatograph is fully capable of measuring VCM at the levels required," Boyd stated.

Methods Are Optional: OSHA's proposal is essentially only a performance standard, Boyd pointed out. "We recognize," he said, "that each employer should be allowed to utilize the engineering controls and work practices that are best suited for his plant. However, the proper application of ventilation systems and further enclosure of exposure sources appears to be a rational approach. It is entirely possible that a reduction of the 10-12% unreacted monomer content, which often occurs at the polymerization

stage, will reduce some of the VCM exposure problems associated with PVC."

More aggressive support for the no-detectable-level proposal came from organized labor. Union officials denied that such a standard would necessarily result in any extensive shutdown of PVC plants, but declared that even the loss of many jobs would be preferable to continued exposure of employees to higher VCM concentrations.

Peter Bommarito, president of the United Rubber Workers and chairman of AFL-CIO's health and safety committee, demanded Congressional investigation of industry efforts to stir up "hysterical" opposition to OSHA's proposal.

"Today, this nation will be blackmailed," Bommarito averred. "Management will tell you that the proposed standard—which they assume without hard data is not feasible—means an end to 1.6 million or more jobs and national disaster. This country survived for nearly 200 years without PVC and we can survive in the future without it."

Bommarito suggested the possibility of a health hazard that had not previously been discussed in connection with PVC: the chance that even a trace of VCM in a pregnant woman's bloodstream might damage the fetus.

Evaluating the Evidence: Bommarito asserted that "the medical facts are now in, and the problem is now in the social and political arena." But industry representatives said that the medical and scientific data are far from conclusive.

In fact, one industry spokesman contended, it's conceivable that OSHA's present temporary standard of 50 ppm.

may be entirely adequate. Researchers may never know whether it is or not, he continued, because it takes 11-20 years for angiosarcoma to develop, and so it's possible that the liver ailments turning up now may have been initiated before manufacturing operations provided the present degree of protection for workers.

Nevertheless, OSHA is expected to rely to a considerable extent on data developed by Director Cesare Maltoni of the Istituto Di Oncologia, a tumor research institute, in Bologna, Italy, and by scientists at Industrial BIO-TEST Laboratories (Northbrook, Ill.). The work at Bologna was sponsored by several large European producers of VCM; the studies at Northbrook were commissioned by the Manufacturing Chemists Assn. In both cases, the researchers have reported that angiosarcoma was contracted by rats and mice that had been exposed to VCM at various levels down to 50 ppm.

"On the basis of what facts we have been given," testified Dr. Herman Kraybill of the National Cancer Institute, "VCM appears to be a potent hepatocarcinogen. If man responds to low-level exposure to VCM as has the rodent, a low-level continuous exposure of 50 ppm. for man would have a high probability for inducing liver cancer."

Deciding on Dicey Data: Jerome Heckman, general counsel for SPI, summed up the industry feelings as to the inadequacy of present scientific information: "Many of these decisions will necessarily have to be based on the rules of probability rather than irrefutable fact. Much of the scientific data obtained by researchers to date is quite inconclusive. A great deal of data remains to be acquired and evaluated. At this precarious state of our knowledge, we believe that misplaced reliance on mere suspicions rather than proved data, or precipitous and emotional reaction to such incomplete information, together with a narrowly construed interpretation of interests, could lead to major economic consequences."

As the hearing ended, Washington observers were predicting that OSHA would stick with the no-detectable-level limit, with some leeway in timing for older plants to install the necessary safeguards.

Meanwhile, the vinyl industry is operating at close to 100% of capacity, and numerous plant expansion projects are under way. If producers can meet the new standards without an exorbitant increase in manufacturing costs, it would seem reasonable to expect PVC demand to keep right on growing at 10-15%/year (chart, above).

OCCUPATIONAL HEALTH & SAFETY LETTER

Vol. 4, No. 12

GERSHON W. FISHBEIN, PUBLISHER

June 22, 1974

Main Office • 1097 National Press Building • Washington, D.C. 20004 • (202) 347-3868

Published twice a month. Rate: \$75 per year; \$135 in combination with Environmental Health Letter
Includes free engraved binder for each publication.

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A.D. LITTLE STUDY WARNS OF ECONOMIC HARDSHIP UNDER VINYL CHLORIDE PROPOSAL:

At least 1.6 million workers may lose their jobs if an "unrealistic" occupational health regulation limiting worker exposure to vinyl chloride forces widespread shutdowns, according to an A.D. Little study conducted for the Society of Plastics Industry and disclosed by SPI on the eve of public hearings scheduled by OSHA on vinyl chloride starting June 25 and likely to go on for the rest of the week. However, an environmental impact statement filed by the Labor Department does not support the dire economic consequences predicted by SPI (see below).

The technology does not exist to meet a "no detectable level" of exposure proposed by OSHA as a permanent occupational health standard, and widespread plant closings could result if the standard is adopted and industry is required to comply with it, warned SPI on the basis of the ADL study. In terms of lost sales and production, the cost would be estimated at not less than \$65 billion, it said.

Vinyl chloride is used primarily to produce PVC resin, which is in turn fabricated into a wide variety of products, including flooring, pipe, curtains, upholstery, phonograph records, telephone equipment, insulated wire, bottles, packaging, luggage, sporting goods and many others.

Employing what is described by SPI as an "Input/Output economic model" for its analysis, A.D. Little was able to estimate the impact on the PVC resin industry itself, and in addition the effect on other major segments of the U.S. economy by defining the interaction of the PVC industry with primary, secondary and final demand markets, SPI said.

For example, it said that the unavailability of PVC resin would have a major effect on the automotive industry, which utilizes PVC in the form of insulated wire and cable, component parts, upholstery and many other products.

The automotive and construction industries would be the hardest hit, with losses respectively of at least 600,000 lost jobs and \$35 billion in lost sales; and for the construction industry, at least 500,000 lost jobs and \$14 billion in lost sales, according to the study.

"The effect on the nation's economy and on the social order in terms of the human hardship it would cause would be catastrophic," said Ralph L. Harding, Jr., president of SPI. "We expect that the final results from A.D. Little will show a potential loss in excess of 2 million jobs. This is all the more regrettable in light of the fact that the industry is taking every step possible to reduce worker exposure to VCM.

"While the VCM and PVC industries fully recognize their obligation to reduce worker exposure to as low level as possible, the proposed OSHA standard is technologically infeasible to achieve, even with the highly sophisticated methods of in-plant control that have been developed by the industry over the years.

"If the proposed 'no detectable level' standard is adopted, the vinyl chloride and polyvinyl chloride resin producing industries will be forced to close down immediately."

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The possible use of substitute materials over a short-term basis to replace PVC in some applications is currently under analysis by A.D. Little and will be presented at the OSHA hearings.

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OSHA SEEKS TOUGHER VINYL CHLORIDE STANDARD BY EARLY OCTOBER

Hopeful that new, tougher standards for vinyl chloride can be issued by Oct. 5 when the current, temporary standards expire, Occupational Safety and Health Administration officials last week wrapped up nine days of hearings on the controversial proposal to prohibit worker exposure to any "detectable amount" of the chemical (TMN, July 1, 1974, p. 59). The hearings ended with an official of Merck & Co.'s Calgon Corp. describing laboratory work showing that vinyl chloride gas can be totally removed from the air by filtering through activated carbon. Industry officials insisted that the tests did not necessarily show the technique could work in an industrial plant, nor how expensive the system would be to install.

Industry continued to take the same basic position that was presented earlier by the Society for the Plastics Industry, that a "no detectable level" standard for vinyl chloride exposure is impossible to meet, both economically and technologically. Representatives of Firestone Plastics, B.F. Goodrich Chemical, and other important makers and users of vinyl chloride monomer and polyvinyl chloride resin, pressed for compromise with the Labor Department's position. Not all industry spokesmen were even willing to accept the proposed alternate position offered by SPI. The trade association suggested a phased reduction in permissible VCM exposure, over a period of years, to a final level of 5 parts per million on a time weighted average and 10 ppm ceiling level, after Oct. 5, 1977.

Reiterating the general industry position, Todd C. Walker, president of Firestone Plastics Co., producer of 400-million pounds of PVC annually, said a zero exposure level to FCM "is not possible," adding that present medical and scientific data "do not justify the abrupt termination" of the VC/PVC industry. Walker said Firestone sees 25 ppm for a time weighted average exposure, with a ceiling of 40 ppm, as a realistic permanent standard. Such a level would provide a safeguard for employees that is "medically prudent and technically feasible."

"Firestone is willing to expend all capital necessary for the research, development and implementation of those procedures which will reduce employee exposure to vinyl chloride monomer to the lowest technologically feasible level," Walker promised. "Close and careful adherence to the level we propose with appropriate and adequate work rules will assure safe working conditions without destroying the entire industry."

Adoption of the no detectable level standard by the Labor Department will result in B.F. Goodrich Chemical Co. shutting down its PVC and VCM operations, John L. Nelson, vice president for manufacturing, threatened. Following the SPI line, Nelson summarized Goodrich's position as follows: (1) company is "committed to reduce vinyl chloride exposure to the lowest level that is feasible;" (2) a no detectable level of VCM is not technically feasible; (3) full-time use of respiratory protection by PVC and VCM workers is not feasible; (4) firm has embarked on multi-million dollar research and development program to reduce VCM exposure levels; and (5) Goodrich pledges to support and cooperate with programs to obtain needed medical and toxicological data.

Interestingly, Nelson also announced that Goodrich is constructing a new PVC facility at its Louisville, Ky., plant, incorporating the company's latest PVC technology. The new facility will employ polymer reactors that are much larger than any now used in the company's five existing PVC plants, and will include computerized controls. "We expect vinyl chloride exposure levels to be lower than those currently existing in our PVC plants," Nelson explained, but he would not predict what those operating levels might be. A mid-1975 production date for the new facility was announced.

Anthony Mazzocchi, citizenship-legislative director of the Oil, Chemical and Atomic Workers Union, reiterated organized labor's position that industry has tried to blackmail the public through scare tactics. Presenting workers with a choice of "your job or your life," Mazzocchi said, conflicts with the basic responsibility of the government and employers "to preserve our human resources."

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Associates, Cambridge, Mass., to conduct an economic analysis of highway de-icing environmental impact.

Other EPA contract awards included \$49,000 to Duke University, Durham, N.C., to develop screening methods for evaluating the neutrotoxic potential of pesticides and toxic substances; \$49,000 to Research Triangle Institute, Research Triangle Park, N.C., to study oxidant precursor relations under pollutant transport conditions; and \$32,000 to SCS Engineers, Long Beach, Calif. to study the cost effectiveness of waste water reuse.

Energy

U.S.-USSR SIGN COOPERATIVE AGREEMENT ON DEVELOPMENT OF ENERGY TECHNOLOGY

A U.S.-USSR agreement on cooperation in energy development with proper regard to the protection of the environment was signed June 28 in Moscow by President Nixon and Soviet President Podgorny.

The objectives of the agreement are to use the potentials of both nations to accelerate research and development of existing and alternative energy sources as well as to increase effectiveness in the use of energy and its conservation.

The agreement provides for exchanges of scientists and scientific information and calls for cooperation in developing technology for exploration and extraction of oil, shale, natural gas, and coal. Emphasis will be placed on finding new ways of drilling that will increase the amount of oil and gas taken from the ground.

A joint committee will be set up to meet once a year on the energy situation and outlook in the respective countries and to approve specific projects. The committee will set up the necessary working groups to carry out the projects and exchanges contemplated by the agreement.

Chemicals

INDUSTRY RECOMMENDS ALTERNATIVES TO OSHA STANDARD FOR VINYL CHLORIDE

A standard requiring the gradual regulation of vinyl chloride in the workplace was recommended by the Society of the Plastics Industry, Inc., during Labor Department hearings June 25-26.

The hearing was scheduled by the Occupational Safety and Health Administration which proposed a standard requiring "no detectable exposure" to vinyl chloride. In its environmental impact statement on the proposal (See p. 259), OSHA said the measures required by the proposed standard probably would reduce vinyl chloride levels in the external environment as well.

The following provisions for polyvinyl chloride resin plants were included in the plastics industry recommendations:

(1) Effective October 5, 1974, a ceiling of 40 parts per million (ppm) of vinyl chloride monomer and a maximum daily time-weighted average of 25 parts per million.

Levels above 40 ppm would require the use of practical and effective respiratory protection.

(2) Effective October 5, 1975, a ceiling level of 25 ppm with no time-weighted average. Levels above 25 ppm would require the use of practical and effective respiratory protection.

(3) Effective October 5, 1976, a ceiling level of 25 ppm with a maximum time-weighted average of 10 ppm. Levels above 25 ppm would require the use of practical and effective respiratory protection.

For vinyl chloride monomer producing plants, the industry proposed the following provisions:

(1) Effective October 5, 1974, a ceiling of 25 ppm and a maximum time-weighted average of 10 ppm. Levels above 25 ppm would require the use of practical and effective respiratory protection.

(2) Effective October 5, 1977, a ceiling of 10 ppm and a maximum time-weighted average of five ppm. Levels above 10 ppm would require the use of practical and effective respiratory protection.

Litigation

COURT TELLS RESERVE TO FORMULATE ENVIRONMENTALLY SOUND DISPOSAL PLAN

Reserve Mining Company must find a way to dispose of its Silver Bay, Minn., taconite tailings wastes in a manner that is sound from "the ecology point of view," Judge Miles W. Lord of the U.S. District Court for the District of Minnesota said July 2.

Lord made his comment during a hearing held to formulate a plan for on-land disposal of the tailings, which currently are being discharged into Lake Superior. In April, Lord ruled that the discharge of the tailings, which contain fibers similar to the carcinogen amosite asbestos, constituted a public health hazard, and he ordered the discharge stopped immediately (6 ERC 1449). The U.S. Court of Appeals, ruling that no imminent health hazard was shown to exist, stayed that order for 70 days, conditioned upon Reserve's working with the Federal Government, Minnesota, and the other plaintiffs in the case to develop an alternate plan for disposing of the tailings.

In the hearing before Lord, Reserve recommended disposal of the tailings at a site near Palisades Creek, located three miles from the Silver Bay plant. Minnesota disputed this site, however, charging that fibers could seep into the lake from the dumping site. The state urged that the disposal area be located near Babbitt, Minn.

Reserve attorney Maclay Hyde told Lord that the Minnesota plan would cost \$307.5 million, compared with a cost of \$185 million for Reserve's proposal. Lord said, however, that "what we do to the ecology is what I'm interested in at this point in the hearings," and "We're wasting our time talking about economics if we're talking about ecology."

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 angioepithelioma 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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General Policy

STEIGER TO PUSH OSHA CONSULTATION IN HOUSE VOTE ON LABOR-HEW MONEY BILL

An additional \$5 million for states to provide on-site consultation for occupational safety and health will be sought by Congressman William A. Steiger (R-Wis) when the House takes up the appropriations bill for the Departments of Labor and Health, Education, and Welfare on June 27.

The bill includes \$100,816,000 for the Occupational Safety and Health Administration, \$31,986,000 for the National Institute for Occupational Safety and Health, and \$5,512,000 for the Occupational Safety and Health Review Commission. It would give NIOSH a \$6,138,000 increase over the fiscal 1975 budget request, but would reduce funds for both OSHA and OSAHRC.

Steiger's amendment would provide funds for OSHA to give the states, under Section 7 (c) (1) of the Occupational Safety and Health Act, to use in providing on-site consultation to employers. The funds would be made available regardless of whether the state had an approved state plan.

The Labor-HEW appropriations bill, reported out of the House Appropriations Committee on June 24, would reduce the OSHA 1975 budget \$1,684,000 from the Administration request, but would represent an increase of \$30,408,000 above the 1974 appropriation.

The committee recommended a 10 percent reduction in the amount requested for office space, and a reduction of \$1,427,000 for new positions. The 161 requested positions were approved, but the committee said that the positions are unlikely to be filled as early as contemplated. The committee also approved an additional 11 positions requested in the budget for staff to evaluate and accredit testing organizations.

In the OSHA budget, \$42 million will be used for matching grants for the 30 states whose plans are expected to be approved by the end of the fiscal year. An additional \$4 million is provided for matching grants for state statistical programs to develop injury and illness data.

The committee also approved an additional 150 positions to provide a total of 1,509 positions for federal enforcement activity. The new positions include 90 compliance safety and health officers, 30 industrial hygienists, and 30 clerical and supporting staff. The total number of compliance officers, including industrial hygienists, will increase from 800 to 920. An estimated 105,000 inspections will be completed, in worksites involving eight million employees.

NIOSH Funding

The committee recommended a \$6,138,000 increase in the budget request for NIOSH. In providing the increase, which would bring the 1975 level to \$31,986,000, the committee allowed for 95 additional positions. This would restore the positions eliminated in fiscal 1974.

NIOSH is expected to produce 26 criteria documents per year. The committee report directed HEW to fill all of the positions provided for in the bill, noting that a substantial part of the increase is to be used to address the problems posed by occupational exposure to petrochemicals and new energy sources.

Of the total increase provided, \$2 million is for the support of training grants, and the balance of \$4,138,000 is to support the additional staff, research, the development of criteria documents and technical services.

Review Commission

The bill includes \$5,512,000 for the review commission, a reduction of \$208,000 from the budget request, but an increase of \$622,000 over the 1974 appropriation.

The committee said it reduced the budget request primarily because the commission has never filled all of its authorized positions and does not plan to do so in 1975. The committee also reduced the budget request for payment of rental charges by \$20,000.

Health Hazards

PLASTICS INDUSTRY, UNIONS CLASH OVER PROPOSED VINYL CHLORIDE RULE

A standard requiring a stepped reduction of permissible levels of vinyl chloride in the workplace was recommended by the Society of the Plastics Industry, Inc., during a Labor Department hearing in Washington, D.C., on June 26.

The Occupational Safety and Health Administration scheduled the hearing to entertain comment on its proposed standard requiring "no detectable exposure" for vinyl chloride (Current Report, May 9, p. 1539).

According to the plastics industry, its recommended standard would be feasible over the next several years, assuming the development of new control technology.

The plastics industry's recommended standard included the following provisions for polyvinyl chloride resin plants:

(1) Effective October 5, 1974, a ceiling of 40 parts per million of vinyl chloride monomer and a maximum daily time-weighted average of 25 parts per million. Levels above 40 ppm would require the use of practical and effective respiratory protection.

(2) Effective October 5, 1975, a ceiling level of 25 ppm with no time-weighted average. Levels above 25 ppm would require the use of practical and effective respiratory protection.

(3) Effective October 5, 1976, a ceiling level of 25 ppm with a maximum time-weighted average of 10 ppm. Levels above 25 ppm would require the use of practical and effective respiratory protection.

For vinyl chloride monomer producing plants, the recommended standard includes the following provisions:

(1) Effective October 5, 1974, a ceiling of 25 ppm and maximum time-weighted average of 10 ppm. Levels above 25 ppm would require the use of practical and effective respiratory protection.

(2) Effective October 5, 1975, a ceiling of 10 ppm and a maximum time-weighted average of five ppm. Levels above 10 ppm would require the use of practical and effective respiratory protection.

Anton Vittone, president, B.F. Goodrich Chemical Company, and spokesman for SPI, said "such a commitment cannot be accomplished overnight since, in certain areas, the technology for accomplishing it is, as yet, not developed and, when developed, facilities must be installed requiring time for engineering, procurement, and installation."

OSHA Testimony

Daniel P. Boyd, director, OSHA Office of Standards Development, said the present judgment of the Labor Department is that vinyl chloride is a carcinogenic agent. As a basis for this judgment, Boyd cited recent data obtained by the Industrial BIO-TEST Laboratories of Northbrook, Ill., under contract with the Manufacturing Chemists Association, and the work of Professor Cesare Maltoni, Bologna, Italy, who testified at an earlier OSHA hearing on vinyl chloride (Current Report, February 21, p. 1189).

On June 20, Boyd said, Maltoni sent the following telegram to Assistant Labor Secretary John H. Stender:

"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 were 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 intraabdominal 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. Cesare Maltoni."

Boyd said there are essentially five manufacturing processes which involve vinyl chloride (VC) or polyvinyl chloride (PVC). The initial stage involves production of VC monomer. Next, the VC is polymerized into PVC, which is then compounded with additives. The fourth stage involves fabrication, or processing the compounded PVC into a finished or semi-finished product. The final stage involves the use or handling of the fabricated product.

Boyd said OSHA recognizes that exposure and control problems confronting employers in each of the stages may differ markedly from those in other stages.

Boyd asked that all supportive data be included with any recommendations for any level that differed from that proposed by OSHA of "no detectable level."

NIOSH Testimony

Dr. Marcus M. Key, director, National Institute for Occupational Safety and Health, said the results of NIOSH's first industrial hygiene survey will be available in about one month.

NIOSH asked the Department of Health, Education, and Welfare Committee to Coordinate Toxicology and Related Programs to define procedures for designing animal studies and to determine the compatibility of the estimated carcinogenic hazard with a socially acceptable risk. These procedures, when developed, should give guidance to experimental design of animal toxicological studies, he said. It is NIOSH's opinion, Key said, that the number of animals exposed in both the European and American studies have been too small to make statistically valid projections of no-effect levels.

Key noted the average age at death for the PVC production workers was 48.5, which is about seven years younger than the average age at death from liver cancer in the U.S. male population.

Key said of major importance are other possible health effects of exposure to VC. Among these is disabling liver fibrosis. This condition has been noted also in most of the U.S. cases of angiosarcoma of the liver associated with PVC production. It is not yet known whether the fibrosis is a precursor of angiosarcoma of the liver or to what extent it occurs among workers exposed to VC, he said.

He said as part of NIOSH's surveillance activities, it has compiled an extensive bibliography of the work literature on VC to provide guidance to the Labor Department and others who are concerned with the problem.

Key discussed also a NIOSH mortality study underway at five PVC production plants and a medical cross-section survey of current and former polymerization workers and controls being designed jointly by NIOSH and the Center for Disease Control.

It is the position of NIOSH that the only suitable respiratory protection devices for VC are supplied air respirators or positive pressure self-contained breathing apparatus, because the odor threshold of VC is considerably higher and a worker would have no indication as to whether he is or is not being adequately protected, he said.

NIOSH's recommended work practices standard was meant originally to be applied to the manufacture of synthetic polymer from VC. In view of the finding of appreciable concentrations of VC in fabrication operations and the reports of angiosarcoma in monomer production and in secondary manufacture, NIOSH recommends that exposure to this carcinogen be controlled whenever it is encountered in the workplace, Key said.

Organized Labor View

Peter Bommarito, president, United Rubber Workers, and spokesman for the AFL-CIO, said if PVC cannot be made and used safely, then the proposed standard must be replaced by an orderly procedure to phase out VC

production and find substitutes for its products, or to phase out the products themselves.

"We have listened to experts from all over the world, and we have concluded that the Government goal of 'no detectable level' for vinyl chloride is both necessary and feasible," Bommarito said. The OSHA proposal comes closer to the ideal standard than any yet proposed or adopted for any workplace hazard.

The implications of the Italian and German studies for the hundreds of thousands of women involved in PVC processing are a dimension that, despite union persistence, seems to be overlooked, Bommarito said. It is clear that PVC particles with unreacted monomer could pose an obvious threat to the unborn child as well as to the mother in a matter of minutes.

A decision must be made whether the proposed standard will be met, (not can be met) or VC monomer production must be phased out, Bommarito said.

Industrial Hygiene Comments

Louis S. Beliczky, United Rubber Workers director, Industrial Hygiene, said certain operations, depending on the type of polymer, could result in concentrations of VC exposure approaching 1,000 ppm or more.

Beliczky listed several types of VC operations that provide more concern than others: PVC resin screening, sifting, sizing, blending, dispensing blended PVC into drums or hoppers, banbury mixing, drop milling, feed milling, three or four roll calendaring operations, and other related film, sheet, and coated fabric operations.

"It has been my experience during my visits to plants where the PVC products are manufactured to observe that little to no local exhaust is or has ever been provided to these operations," Beliczky said.

Beliczky recommended several changes to the OSHA proposed standard including the following:

(1) Change one ppm plus or minus 50 percent to read one ppm plus or minus 0.5 ppm.

(2) Under "Control Methods," the word insufficient should probably be changed to ineffective.

(3) "Scope and Application" should apply wherever VC is present.

(4) More specific information must be obtained to qualify decontamination.

(5) Some reference should be made qualifying the method of analysis and sensitivity of an acceptable analytical method.

(6) Absorption should specify inhalation, skin contact, and ingestion.

(7) Continuous monitoring systems for VC should be required.

(8) Any written emergency action plan should be submitted to OSHA for approval.

(9) Positive fail-safe lockout procedures should be required.

(10) Medical records should be retained for the lifetime of the employee.

"Our general impression is that some good objective judgment was used by the Office of Standards in preparing the proposed permanent standard for vinyl chloride," Beliczky said.

Health Hazards

DOL IMPACT STATEMENT ON VC DIFFERS FROM INDUSTRY VIEW ON PROJECTED COST

A preliminary assessment of the cost of compliance with the standard proposed for exposure to vinyl chloride (VC) indicates that the expenditures required will not be prohibitive, according to the Department of Labor Draft Environmental Impact Statement.

The standard was proposed by the Occupational Safety and Health Administration on May 9, and the Labor Department submitted the draft environmental impact statement to the Council on Environmental Quality on June 12. Deadline for comments on the statement is July 17.

The statement says the probable impact of the standard will be that, in addition to improving the quality of the work environment, the institution of control measures required by the standard will probably reduce the concentration of the vinyl chloride monomer in the ambient air.

The second major impact is the additional capital and other operating costs industry will incur in complying with the standard, the statement said. Compliance costs potentially threaten the existence of marginal firms, will raise prices for vinyl chloride products, and will encourage, to some degree, substitution of other products for vinyl chloride. The statement notes that offsetting these negative consequences is the fact that vinyl chloride is so central to many products that demand will be, at least in the short run, relatively unresponsive to price changes. Further, it states, costs in terms of medical expenses and diminished quality of life otherwise accruing to the worker will be internalized in the production process. Vinyl chloride, a petrochemical, is produced from irreplaceable natural resources, and reduced demand on these resources could be of merit, the statement said.

Substitute Materials

An increase in product costs may cause eventual substitution of other materials for vinyl chloride, the statement said. These include wood, metal, and rubber. Many of the substitute materials are in short supply, however.

Other Federal Actions

The draft statement said that since VC and polyvinyl chloride (PVC) are found in many places throughout society, many federal agencies in addition to OSHA have become concerned about possible exposures.

On April 26, 1974, the Environmental Protection Agency announced an emergency suspension of all pesticide spray products containing vinyl chloride and gave notice of its intent to cancel the registration of these products. At the same time, EPA requested that all existent stock of such products be recalled by the manufacturers (Current Report, April 25, p. 1480). The Food and Drug Administration took similar action (Current Report, February 28, p. 1224). Significant programs are underway to determine other areas where VC or PVC formulations should be regulated, the statement said.

It noted also that despite the fact that VC and PVC have been present in large quantities for many years, little

is known about their health effects. As a result, many studies have been initiated in the past several months, and changes are being proposed.

The Center for Disease Control and the National Institute for Occupational Safety and Health are conducting a national search for records of all deaths from angiosarcoma of the liver since 1965, and are conducting epidemiological studies on many aspects of VC, the statement said. The most significant effort is a comprehensive survey of workers from 11 polymerization and fabricating plants. Employee medical records are being subjected to intense screening to determine the scope and magnitude of VC effects. NIOSH is examining also the types of monitoring equipment that would be feasible for use in the workroom environment. A primary problem was developing monitoring equipment of greater sensitivity than was used in the past when the principle concern was the explosive potential of VC.

The National Cancer Institute is conducting some cell culture studies to elicit the carcinogenic mechanism of VC, the statement said.

The National Bureau of Standards is performing some preliminary investigations into the development of permeation tubes which could serve as more accurate calibration sources for vinyl chloride monitoring equipment. NBS also is examining the mechanism by which residual VC escapes from the polymer, according to the statement.

Alternatives

The statement examined alternatives to the "no detectable level" of exposure proposed by OSHA including: (1) ban VC production entirely; (2) allow zero exposure; (3) retain the level of 50 ppm as specified by the emergency temporary standard (Current Report, April 11, p. 1411); (4) rely on personal protective equipment as the only source of protection; and (5) set a limit for VC concentrations in the workplace at some point between one ppm and 50 ppm. The statement points out that in the absence of scientific evidence to conclusively establish a specific safe level, the selection of a permissible level between one and 50 ppm would be judgmental.

Health Hazards

OSHA WILL NOT ISSUE IMMINENT DANGER CITATIONS FOR VINYL CHLORIDE STANDARD

Imminent danger citations will not be issued for alleged violations of the emergency Temporary Standard for vinyl chloride, according to Occupational Safety and Health Administration Program Directive 200-29.

As originally conceived, the directive provided for imminent danger citations (Current Report, May 2, p. 1516). The directive was recalled for revision before it was officially issued (Current Report, May 23, p. 1622).

The elimination of provisions for imminent danger citations was one of two significant changes made in the directive prior to its issuance. The second significant change involved the addition of a provision that employers monitoring for vinyl chloride conduct the monitoring on a workday with the maximum number of

workshifts and that 75 percent of the workers on each shift be monitored.

Other changes to the directive were minor in nature.

Health Hazards

ECONOMIC IMPACT OF PROPOSED VINYL CHLORIDE RULES STUDIED BY A.D. LITTLE

Loss in employment would be a minimum of 1.6 million jobs under the vinyl chloride rule proposed by the Occupational Safety and Health Administration, according to the preliminary results of a study on the economic impact of the OSHA proposal by Arthur D. Little, Inc., Cambridge, Mass.

The study was undertaken at the request of the Society of Plastics Industry, Inc., following the OSHA proposal which calls for "no detectable level" (Current Report, May 9, p. 1539).

The study showed also that if the rule were adopted, the loss in production and sales in industry would be a minimum of \$65 billion. Employing an input/output economic model for its analysis, the consulting firm was able to estimate not only the impact on the polyvinyl chloride resin industry itself, but also the effect on other major segments of the nation's economy by defining the interaction of the PVC industry with primary, secondary, and final demand markets.

The study notes that the unavailability of PVC resin would have a major effect on the automotive industry which utilizes PVC in the form of insulated wire and cable, component parts, upholstery and many other products. The possibility of using substitute materials over a short term basis to replace PVC in some applications is currently under analysis by A.D. Little.

Immediate Shutdown Impact

The study estimates show immediate shutdown would result in the vinyl chloride monomer industry loss of \$0.2 billion, and some \$0.6 billion in industries dealing with the PVC resin.

In construction-related industries, whose major products include paint, flooring, pipe, siding, panels, trim, insulated wire, and wall covering, there would be a loss of \$14 billion in production and sales, and some 0.5 million jobs. In apparel-related industries, whose major products include outerwear, curtains, draperies, table covers, furniture, and upholstery, production and sales losses would be \$2.5 billion and some 0.1 million jobs would be lost, according to the study.

Motor vehicle-related industries, whose major products include upholstery, paint, insulated wire and cable, and component parts, would have \$35 billion in sales and production losses, and some 0.6 million job losses. Specialty products industries whose major products include phonograph records, telephone and telegraph equipment, and lighting equipment, would suffer \$8 billion in sales and production losses, and 0.3 million jobs. Miscellaneous products industries, whose major products include bottles, hoses, packaging, film, credit cards, medical tubing, footwear, luggage, handbags, toys, and sporting goods, would

suffer minimum losses in production and sales of \$4.7 billion and 0.1 million jobs, the study showed.

The president of SPI, Ralph L. Harding, said "the effect on the nation's economy and on the social order in terms of the human hardship it would cause would be catastrophic. We expect the final results from A.D. Little will show a potential loss in excess of two million jobs. This is all the more regrettable in light of the fact that the industry is taking every possible step to reduce worker exposure to VC monomer," he said.

Harding noted that while the industries involved fully recognize their obligations to reduce worker exposure to as low a level as is possible, the proposed OSHA standard is "technology infeasible to achieve, even with the highly sophisticated methods of in-plant control that have been developed by the industry over the years."

Legislation

INDUSTRY ASSOCIATIONS FAVOR ON-SITE CONSULTATIVE INSPECTIONS

On-site consultative inspections for job safety and health hazards were endorsed by major manufacturing and commercial associations in hearings before the House Education and Labor Committee's Select Labor Subcommittee on June 25.

The hearings, which will continue twice a month for the rest of the present term of Congress (Current Report, March 21, p. 1326), are focused on the effects of the Occupational Safety and Health Act and proposed legislation to improve its effectiveness. Representatives from the National Association of Manufacturers, Chamber of Commerce of the United States, Associated General Contractors of America, and Congressman David Towell (R-Nev) testified.

All of the spokesmen indicated that there is widespread recognition in industry of the need for occupational safety and health legislation, although there was wide disagreement with the methods used to enforce OSHA to date. Changes to OSHA most frequently recommended included elimination of penalties for first nonserious violations, consultative inspections, and the filing of economic impact statements with proposed standards.

NAM View

Michael P. Stinton and John Johnson, National Association of Manufacturers, recommended a number of changes to OSHA under two broad categories: administrative and legislative. NAM differed from the view expressed by Assistant Secretary of Labor for Occupational Safety and Health John H. Stender that the first phase of standards development is largely complete. "Much work remains to be done," Stinton told the subcommittee.

Among the administrative changes to OSHA recommended by NAM were:

- Better means should be made for the dissemination of proposed rules, standards, and regulations.
- The Occupational Safety and Health Administration should propose performance-type standards where possible.

- OSHA should make maximum use of standards advisory committees.

- Jurisdictional issues between OSHA and other federal agencies should be resolved now and the Secretary of Labor should issue the overdue 4(b)(3) report.

- An effort to reduce recordkeeping should be made by OSHA.

Legislative priorities endorsed by NAM include the following recommendations:

- On-site consultative inspections should be made available to an employer of any size. These inspections should be under OSHA.

- Economic impact statements should be issued with publication of proposed rules setting new and revised standards.

- First-instance nonserious penalties should be eliminated.

Chamber of Commerce

Richard B. Berman, director of labor law, and Richard O'Brecht, labor relations attorney, Chamber of Commerce of the United States, stated that the fundamental problem concerning OSHA was one of perception. OSHA, they stated, is "dominated by the erroneous assumption that employers simply will not act voluntarily to eliminate workplace hazards."

Among the legislative changes to OSHA recommended by the Chamber of Commerce were:

- On-site consultations.
- Filing economic impact statements with proposed standards.
- Modification of Section 17(c) to prohibit imposition of a penalty for a first-instance nonserious violation.
- Permission to use equipment in non-compliance with OSHA where the continued use would not result in a serious hazard.
- Extension of time for the effective dates of emergency standards so that they will become effective 30 days after publication in the Federal Register.
- Certain other changes involving posting requirements, contest period, and walkaround rights.

All of the proposed changes would encourage desired voluntary compliance with OSHA, the spokesmen stated.

AGC Recommendations

Leonard E. Dodson, chairman of the safety committee, Associated General Contractors of America, stated that bills which would discriminate in the application of OSHA based on size of the firm are unacceptable to AGC as are bills which would differentiate between light and heavy construction. Dodson testified.

Specific recommendations from AGC concerning OSHA were:

- Application of OSHA equally to all state and municipal operations involving state and municipal employees.
- "Good Samaritan" coverage for both employer and employee.
- Uniform standards or requirements for OSHA and state plans.
- Consultative services to all without penalty.
- Provisions of OSHA area directors to grant variances.



Appropriations

HOUSE VOTES TO LIMIT ENFORCEMENT OF OSHA, PROVIDE ON-SITE CONSULTATION

A ban on Occupational Safety and Health Administration inspections of firms with fewer than 25 employees and a provision allowing up to \$5 million for states to provide on-site consultation were approved by the House June 27 during floor debate on the appropriations bill (HR 15580) for the Departments of Labor and Health, Education, and Welfare.

Funds for occupational safety and health were approved as recommended by the House Appropriations Committee (Current Report, June 27, p. 83) - \$100,816,000 for OSHA, \$31,986,000 for the National Institute for Occupational Safety and Health, and \$5,512,000 for the Occupational Safety and Health Review Commission.

An amendment, by Congressman Steven D. Symms (R-Idaho) to reduce OSHA funds to last year's level of \$70.4 million, was rejected by a vote of 179 to 218. Another amendment, by Congressman John N. Happy Camp (R-Okla), to delete all funds for OSHA was rejected by a vote of 97 to 295.

A ban on OSHA enforcement in small businesses, which prohibits the use of any funds to pay the salaries of OSHA inspectors inspecting firms with fewer than 25 employees was agreed to by a vote of 201 to 194. The effect of the amendment, which was offered by Congressman Paul Findley (R-Ill), will be to exempt 90 percent of all establishments and 30 percent of all employees from OSHA coverage.

Congressman William A Steiger's (R-Wis) attempt to obtain funds for states to provide on-site consultation was only partially successful. Steiger attempted to add \$5 million to the bill for consultation and had the support of the Secretary of Labor, the National Association of Manufacturers, the American Retail Federation, the Menswear Retailers of America, and the National Small Business Association. Subsequent amendments specified that the \$5 million must come from the \$100.8 million OSHA appropriations.

A similar 25-employee limit, also urged by Findley, was voted by the House last year only to be limited by the Senate and during conference to 15 and ultimately dropped with the President's veto of the Labor-HEW money bill.

The bill now goes to the Senate, where appropriations hearings are in progress.

Health Hazards

SPI "CRASH" EXPOSURE STUDY SHOWS SUPPORT FOR INDUSTRY POSITION ON VC

Data from a "crash" study of worker exposure to vinyl chloride in 36 plants of 20 producing companies failed to support the need for the "no detectable level" standard

proposed by the Occupational Safety and Health Administration, Dr. Carl U. Demehl, associate medical director, Union Carbide, said during OSHA hearings on June 26-28.

The OSHA hearings on a standard for vinyl chloride (VC) continued from June 24 to 29 (Current Report, June 27, p. 83), and will resume July 8.

Advancing the position of the Society of the Plastics Industry, Inc., Demehl said examinations of the men studied "have failed to show the existence of abnormal liver function tests in greater proportion than would be found in a control population."

The study was conducted in the last few weeks prior to the beginning of the public hearings on June 25 and was done in preparation for the industry's testimony. Some 3,843 persons were involved. Of these, 787 had more than 10 years exposure. Of the total, 1,402 workers had a significant time lapse since first exposure, some 104 being exposed longer than 20 years, and 416 workers having had 20 years time lapse from first exposure to the present, Demehl said.

He noted plants where cases of angiosarcoma of the liver were found were, obviously, excluded from the study (South Charleston, S.C., Louisville, Ky., Pottstown, Pa., and Niagara Falls, N.Y.) as were plants with less than 10 years exposure. Sufficient exposure in terms of time and levels, up to at least 250 ppm, were characteristic of these men, Demehl said. Some 416 men had been exposed for the recognized latent period of 20 years.

There is no case of angiosarcoma of the liver among these 1,402 men even though their exposure time is sufficient for disease to have occurred and exposures are believed to have been in excess of 50 ppm, Demehl said.

Demehl conceded that the sample examined may have been too small.

Bio-Test Inhalation Study

Dr. M. L. Keplinger, manager, Toxicology Industrial Bio-Test Laboratories, Northbrook, Ill., reported preliminary results of a study being conducted to determine the effects from inhalation of VC monomer to rats, mice, and hamsters. The protocol for the study was designed by the Manufacturing Chemists Association, he said.

The study was designed as a life-span study in these species which means one and a half to two years for the "in-life" portion, with tissue examination of pathologists and data evaluation to follow this period. The exposures of the animals were started on September 10, 1973, and final results should be available about December, 1975, Keplinger said.

The study was designed to complement the studies of Dr. Cesare Maltoni of Italy. There were 600 animals exposed in a single chamber operated under dynamic conditions, sealed, and operated under slight negative pressure to accommodate leaks, he said.

The concentrations in the chamber are analyzed and monitored daily, and are accurate, Keplinger said. Moribund and dead animals receive gross autopsies and gross lesions are photographed. The major organs of all animals

are fixed for histological examination. Keplinger said only tissues from a few animals have been examined histologically so far.

Study Results

Preliminary examinations of tissues from mice which died after about six or seven months of exposure indicated "possible tumors in the livers, lungs, mammary glands, and/or skin," Keplinger said. On April 15, 1974, MCA and Industrial Bio-Test Laboratories presented these findings to the Environmental Protection Agency, OSHA, and the National Institute for Occupational Safety and Health (Current Report, April 25, p. 1478). Conclusions from the data are preliminary, Keplinger said. He added that the relevance of these findings for prediction or extrapolation to effects in man at the same concentrations and durations of exposure are "quite conjectural."

Tissues other than those of the liver have not been studied to determine other toxic effects from VC and more animals appear to be lost at higher doses, Keplinger said.

A. D. Little Study

Vince P. Ficcaglia, manager of economic analysis and forecasting, Arthur D. Little, Inc., Cambridge, Mass., said the "United States Polyvinyl Chloride Resin Industry Impact Analysis" done by ADL, commissioned by SPI, will be available within 30 days (Current Report, June 27, 86).

He indicated ADL research showed the extent to which materials could be substituted for PVC resin in the immediate future (to about one year) is "quite limited" and would have an insignificant effect on reducing ADL's prediction of 1.7 to 2.2 million job losses and the loss of domestic production value of \$65-\$90 billion.

Ficcaglia said because PVC resins can be compounded to yield a wide range of materials with specific properties, the PVC resins are used in more applications than any other type of plastic material. He noted methods used by ADL to prepare the forthcoming report and said "we focused on measuring the magnitude of the economic impact resulting from an immediate shutdown of all PVC resin plants in the nation. Three steps for analysis included identification of PVC resin usage by product and end-use application ("modules"), assessment of the extent of PVC resin dependency in each module, and assessment of the potential for immediate substitution of other raw materials.

Among ADL conclusions was that it would not be possible to duplicate the exact properties of vinyl plastic products by using raw materials, primarily because it would still take up to an additional three or four years to complete all of the necessary research and development leading to the required changes in product, process, and equipment design and the actual delivery and installation of new equipment. He noted also the extreme "tight supply" of substitute raw materials.

Those substitute products which would take the longest time to develop are those that are critical products for the construction and motor vehicle industries, according to ADL.

Angiosarcomas Characterized

John E. Ertel, general manager, Robintech, Inc., Fort Worth, Tex., described a recent meeting of a subcommittee of the Vinyl Chloride and Polyvinyl Chloride Producers Committee at which histories of the 13 U.S. cases of liver angiosarcoma were characterized. These commonalities were:

- Each individual case was exposed to VC for a minimum of 12 and a maximum of 30 years prior to diagnosis;
- Each case was exposed to high time-weighted average exposure to VC for a minimum of ten and a maximum of 28 years;
- Of the 13 angiosarcoma cases, 12 were employed for many years in PVC manufacturing plants, and one in a VC plant. The latter was employed for a brief period of time in a PVC plant as well;
- None of the 13 cases were reported to have had Acroosteolysis;
- No agent other than VC monomer was found to be related consistently to the 13 cases;
- Four of the 10 fatal angiosarcoma cases were detected only upon retrospective examination of histopathologic preparations from the autopsy at the time of death; and
- No maintenance personnel such as pipefitters, electricians, and the like who could have been exposed to high levels of VC monomer were among the 13 cases.

Among conclusions from these characterizations reached by the group were:

- All 13 cases of angiosarcoma of the liver were employees who had been exposed over long periods of time to continuous high levels of VCM. These levels were frequently above the odor threshold and were estimated to be a minimum of 500 ppm TWA, and may have been as high as 2,000 to 4,000 ppm TWA. There is some controversy in the literature as to what the actual threshold level is for the olfactory detection of VC;
- The data reported last February by Maltoni (Current Report, February 21, p. 1189) indicated that the development of angiosarcoma in rats is dose related.

Ertel said the group concluded that the emergency temporary standard of 50 ppm "appears to assure that employees will no longer be exposed to any undue occupational hazards." He noted, however, "additional angiosarcoma cases from among the VC industry workforce are likely to be reported over the next 10 or 20 years since there are still many veteran workers employed who held their jobs during the 1940's, 50's, and early 60's." He said the new attention being given VC "is very likely to lead to increased diagnosis of this condition in the general population." He added there should not be great reliance on the 25 cases per year figure for the general population as an average as a basis for comparing the occurrence of the disease in the general population with its occurrence among workers in the VC and PVC producing industries.

Fabricators and Processors

Several concluding witnesses for the extensive SPI testimony provided evidence of low levels of exposure in processing and fabricating operations and recommended these types of operations be exempted from inclusion in

the final standard. These witnesses called for continual monitoring and OSHA surveillance of VC and PVC fabricating and processing operations. Companies supporting these exclusions included B. F. Goodrich Chemical Company, Diamond Shamrock Chemical Company, Goodyear Tire and Rubber Company, and Gollob Analytical Service Corporation.

Canister Respirators

Robert D. Soule, vice president, industrial hygiene services, George D. Clayton and Associates, Southfield, Mich., said it is not practical and in many ways it is unsafe to operate a chemical production facility when workers are required to wear any type respirators on a full-time basis.

It is not unreasonable, he said, to require such respiratory protection during only a part of the working day. He recommended canister-type masks, with necessary precautions, be used where the concentration of VC permits, because of the greater mobility and freedom of motion that is permitted the wearer. He said also where the concentration of VC exceeds the safe working range of canister-type respirators, only air-supplied respirators of suitable design should be used.

Roger W. Strassburg, director of environmental affairs, B. F. Goodrich Company, said respiratory protection with canisters is necessary only when exposure exceeds the established level, but remains well below emergency conditions.

He indicated there are certain types of operations that require either air-fed hose, such as cleaning "polys" or air tanks, as in the case of tank car unloading and emergency situations. He urged that OSHA allow management the necessary flexibility to select and use the most appropriate respiratory equipment for the protection of employees.

Medical Surveillance

Dr. Maurice N. Johnson, director of environmental health, B. F. Goodrich, said the proposed medical surveillance provisions have three major deficiencies. The proposal is directed to detection of angiosarcoma of the liver or other liver disease, rather than to evaluating the general health of employees. The examination should not be directed exclusively toward liver pathology, he said. The proposed standard attempts to define which tests should be done to discover liver angiosarcoma, or the pathology which may precede it even though it is generally recognized that none of the proposed tests has yet been demonstrated to be definitive for this purpose, he said.

Johnson said the proposed standard leaves little room for the clinical judgment of the examining physician in evaluating the health status of the employee and recommending the advisability of his working in any given environment.

Johnson said a better approach was used by OSHA in dealing with its standard for other carcinogens. "Adoption of a medical surveillance standard similar to that already promulgated for the other carcinogens would best accomplish" evaluation of employees' health, he said.

Plastics Industry Stand

Industry spokesmen, led by the Society of the Plastics Industry, Inc., recommended changing the scope of the standard for exposure to VC proposed by OSHA.

The standard should encompass only those areas and operations that pose or may reasonably be expected to pose problems and be made inapplicable to certain types of operations, primarily processing and fabricating plants, Jerome H. Heckman, SPI counsel, testified.

Heckman said there are few problems in the cited operations that could not be handled by proper ventilation and work practices, and said for these operations, there should be a separate standard or work practices prescribed. Fabrication plants and processing plants should be excluded from the scope of the standard, he said. The only problems in these plants are found in unloading or mixing areas and these problems should be handled apart from the proposed standard, he said.

SPI recommended a change in section (b) (4) of the OSHA proposal that would provide "no area be considered contaminated where the polyvinyl chloride received or used therein contains less than 0.1 percent residual monomer now or less than 0.01 percent residual monomer by October 5, 1977."

The definition of "emergency" in Section (b) (8) should be altered, SPI said, to follow the National Institute for Occupational Safety and Health recommendations of March 11, 1974, which defined the term as "an unforeseen circumstance or set of circumstances, such as a ruptured transfer line, resulting in the release of vinyl chloride sufficient to produce acute symptoms among workers exposed or having contact with vinyl chloride."

He said the industry position favors constant sequential monitoring, with specified procedures in lieu of the presently proposed 95 percent confidence level requirement which SPI considers "vague and meaningless."

The employee monitoring observation provision (Section (c) (3)) should be revised so that the observation of the monitoring would be handled by an elected employee, he said.

Heckman said SPI is "unable to see how the public interest would be served by the type of sign and labeling language recommended by OSHA, and noted the need for instruction of employees in the hazards involved independent of labeling. He cited the obvious example of labeling of cigarette packages.

B. F. Goodrich

Anton Vittone, president of B. F. Goodrich Chemical Company, Cleveland, Ohio, appearing with the plastics industry panel, cited the "inherent uncertainties of extrapolating from animals to humans, and referring to Maltoni's experiments (Current Report, February 21, p. 1189) said the recent results of Maltoni's data, where rats were exposed to 50 ppm of VC, indicated that the latency period was approaching the life span of rats which "we understand is equivalent to an 80-year human life span."

It is the position of industry that it will commit itself to lowering exposure of its workers by a combination of lower levels of vinyl chloride in the work atmosphere and work practices, he said. Vittone noted that SPI (Current

Report, June 27, p. 83) recognized that its proposal makes "projections for improvement which are not in and but depend on new developments and additions to facilities."

He said further that the product of VC, its polymerization into PVC resin, and the processing of PVC resin into semi-finished products, is treated in the proposed standard as "one industrial health problem," and noted the difficulties in such an approach. That segment of processes involving the manufacture of VC and PVC resins "are not a monolithic operation," he said.

Vittone said the imposition of the "no detectable level" would require the full-time utilization of self-contained breathing apparatus during the work period in VC and PVC resin-producing facilities which would impose a "severe and unnecessary physical burden on workers as well as potential health and safety problems."

Need for Variances

Vittone said it should be recognized that SPI's proposal would require ambitious and difficult expenditure problems and many companies probably would require variances of time or methods. Such provision for variances should be included in the standard, he said. It should be recognized also that medical and epidemiological data may be developed in the meantime that will require or allow a reexamination of the proposed levels.

SPI President Ralph L. Harding, Jr., said total plastics production in 1973 was 27 billion pounds, including PVC and other vinyls, 5.4 billion pounds, according to SPI statistics.

Dr. Joseph F. Tomashefski, chief, pulmonary disease department, Cleveland Clinic, said respirators, if used, should be selected carefully for the specific hazard. He noted undesirable features and hazards associated with respirators including increased resistance to breathing, decreased efficiency of function, poor fit, leakage, false security, allergic reactions, irritation from perspiration and other particulate depositions, rebreathing, dead-space ventilation, poor vision, fogging of the eyepieces, speed impediments, and psychological and contamination problems. Also, he added, a large segment of the population, many already working within industry, have chronic obstructive pulmonary diseases such as bronchitis and emphysema and should not be employed in a work environment which requires the continued or frequent use of respirators.

Tomashefski added he did not see how wearing of respirators could be enforced.

Support for Proposal

Dr. Irving J. Selikoff, professor of medicine, Mount Sinai School of Medicine, and co-chairman of the Working Group on Toxicity of Vinyl Chloride-Polyvinyl Chloride, New York Academy of Sciences, said "the only prudent course for the prevention of hemangiosarcoma of the liver among VC workers is to provide a work environment with no detectable level of VC."

Accidents will occur and higher levels of VC will result, in such circumstances, as the proposed standard states, appropriate personal protection should be provided, he said. In terms of human experience, there are only two

benchmarks, Selikoff said. The only safe level that is known to avoid VC-associated hemangiosarcomas, is zero, and at the other end of the spectrum, it is known that hemangiosarcomas have occurred at levels of exposure which were obtained in the past in polymerization plants.

Although there was a published threshold limit (TLV) for VC of 500 ppm, recommended by the American Conference of Governmental Industrial Hygienists, apparently little monitoring or surveillance was done and few companies had any significant number of measurements made, until recently, he said. There are no data whatsoever concerning populations or workers exposed at five ppm, 10 ppm, or 15 ppm, that might correlate with observations concerning long-term risks at 15, 20, 25, or 30 or more years from onset of exposure, Selikoff added.

Selikoff discussed numerous ongoing medical experiments being conducted by himself and many scientists, the results of which are not all complete. He said the proposed standard states that "if liver function abnormalities are determined to be unrelated to liver disease, the employee may be permitted to return to VC-related employment subject to individual medical evaluation," and expressed doubt about the wisdom of the phrase.

Exposure of Women

Selikoff referred to the demonstration by Maltoni that exposure of pregnant rats to VC may result in angiosarcoma in the offspring. This indicates that women in the childbearing age should not work in any area in which there are detectable levels of VC and "this should be made a hard and fast rule," he added.

Harvard Study

A 50 percent excess of deaths due to cancer was found in a study of two Kentucky B. F. Goodrich plants where workers were exposed to vinyl chloride monomer and polyvinyl chloride, according to Dr. John M. Peters, associate professor of the Harvard School of Public Health.

The study, preliminary results of which were given by Peters during the hearing, showed multiple cancer sites in those studied, and an increase in cancers in the population studied.

Death certificates of 161 white, deceased males from the two plants were tabulated. The expected cases to which the subjects were compared, were derived from data on U.S. white males based on age, time, and cause of death.

Of the 50 percent excess deaths that were found, eight were liver cancers, five of which were angiosarcomas. The observed number of liver cancer cases was 10 times the expected number, Peters said. There was a 60 percent excess of lung cancer (13 cases with 7.9 expected), and a 320 percent excess of brain cancer (5 cases with 1.2 expected). Peters noted suicide was excessive also, 10 cases with 5.3 expected. Single cases of unusual cancers were also observed, he said.

Peters said "the time trend is also alarming." Cancer experience in this population before 1965 was almost as expected. Since 1970, there have been 19 cancer deaths with 9.2 expected, he said.

This proportional mortality analysis does not allow the calculation of cancer rates. It is possible that this group of workers does not suffer a greater overall mortality than the general population, Peters said. "The excess of several specific cancers plus the time trend suggest a causal link between occupational exposure to VC and cancer," Peters said.

The study was directed by Dr. Richard R. Monson, Harvard University, and was initiated in February. The study was financed by Harvard and all information was obtained exclusively from the death certificates, according to Peters.

Dow Chemical

A team of witnesses from Dow Chemical Company presented evidence that operations are limited generally to worker exposure of 10 ppm on an eight-hour time weighted average in most operations.

Occasional malfunctions of equipment or other temporary situations can cause brief periods when VC concentrations are higher (often called "excursions"), spokesmen said.

K. H. Oelske, production manager, Texas Division of Dow, said medical records indicated the Dow worker population exposed to VC had a malignancy rate no different than that expected for the unexposed group with which they were compared. The accumulated records show no evidence of any deaths due to angiosarcoma or other liver malignancy of any kind in Dow workers exposed to the chemical.

Other Dow witnesses described monitoring systems in use. It was pointed out that flexibility in design of monitoring systems to allow the use of methods most appropriate for each plant situation was "very important."

Continuous area monitoring was suggested as the best way to provide early detection of equipment failure or malfunction that could result in worker exposure. This equipment can be coupled to alarm systems to give immediate alerts when concentrations rise, it was noted.

Tenneco Chemicals

Joseph Fath, vice president, Tenneco Chemicals, Inc., said Tenneco proposed sequential monitoring of all areas within the PVC polymerization plant sites.

This is considered a vastly superior and a more conscientious technique of checking existing levels than personnel monitoring, Fath said. He said it is essential that the permanent standard recognize the need for a time period during which engineering and operational changes can be made in line with the more detailed proposals.

A vital element in Tenneco's proposal is the proposed "drastic reduction" of residual monomer content in the PVC resin to be delivered to Tenneco customers to 100 ppm or 0.01 percent maximum by October 5, 1977. "This residual monomer constitutes the only source of VCM which is released from PVC resin because PVC does not depolymerize," Fath said.

Fath said it would be feasible to comply with the levels of exposure presented in the proposal of the Society of the Plastics Industry, Inc. (Current Report, June 27, p. 86).

Air Products

Richard Fleming, group vice president, Air Products and Chemicals, Inc., said the proposed standard fails to meet the basic requirements in the Occupational Safety and Health Act either as to necessity or technical and economic feasibility. It represents a substantial departure in principle from other standards, he said.

Fleming proposed a limit of 25 ppm with a 40 ppm ceiling, in place of the no detectable level. Monitoring should include both the work done and the employee, he added. Respirators should be of the half-face or full-face, air supplied type, and should be worn as soon as possible after it has been detected that the ceiling has been exceeded. Impervious suits should not be required, but clean work clothing should be furnished as appropriate. "We propose that the permanent standard not apply to PVC, waste streams, or finished or semi-finished products, including compound, which contain less than 0.05 percent by weight uncombined VC, or to transportation or processing of PVC with this level of free VCM," he concluded.

Health Hazards

PROPOSED VINYL CHLORIDE STANDARD TO BE DELAYED UNTIL FEASIBILITY STUDY

The standard on vinyl chloride will not be issued until a study of the technological and economic feasibility of safe levels recommended by the National Institute for Occupational Safety and Health has been made, Daniel P. Boyd, director, office of standards development, Occupational Safety and Health Administration, told OSHA.

It is understood that the contract for the study will be awarded to Booz Allen Applied Research, Inc., Bethesda, Md., OSHA learned. "Now that we have the drift of the hearings of VC (Current Report, June 27, p. 83), we are able to focus on the cost-benefit elements which must be part of our decision-making process," Boyd said. Included in this process are ideal standards for total protection of workers in all circumstances, technological and economic feasibility of achieving these standards, and psycho-social and political considerations, he stated.

"What we in OSHA have to do is to arrive at a practical solution based on a subjective, but detailed, analysis of all of the factors under consideration," Boyd stated. He doubted that the final standard would require "no detectable exposure" as originally issued by OSHA (Current Report, May 9, p. 1539). OSHA will issue a final standard on or before the deadline of October 5, he said.

Other Standards

Boyd said proposed standards for lead, beryllium, carbon monoxide, and toluene diisocyanate (TDI) will be issued during the next few months (Current Report, June 13, p. 35). "There is action being taken on all 12 NIOSH criteria documents that we have in-house now," he said.

Action on the criteria documents will receive top priority as soon as the VC standard has been issued, OSHA was told.

Boyd mentioned that negotiations with the Environmental Protection Agency on the draft noise standard issued by OSHA in June (Current Report, June 6, p. 4)

Proposed Vinyl Chloride Rules Hit as Costing 2 Million Jobs

By Tim O'Brien

Washington Post Staff Writer

The American plastics industry warned yesterday that proposed government rules to slash vinyl chloride levels in factories to eliminate the danger of cancer could cost the nation up to 2.2 million jobs and as much as \$90 billion in annual production.

Anton Vittone, president of B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could virtually shut down his industry.

Vittone appeared at a public hearing with scores of other industry representatives

to oppose implementation of the new regulations, which would limit factory air levels of vinyl chloride to less than one part per million—so small as to be undetectable.

In recent months vinyl chloride—a key chemical in the manufacture of many plastics—has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been rapidly accumulating.

Within the past two weeks, testified Dr. Marcus M. Key of the National Institute for Occupational Safety and Health, "we have identified two deaths from angiosarcoma of the liver in men employed at

plants utilizing polyvinyl chloride to fabricate other products."

Key said seven cases have been reported at a Goodrich plant in Kentucky, three cases at a Goodyear plant in New York, two cases in a Union Carbide plant in West Virginia and one case in a Firestone plant in Pennsylvania. Of the 13 reported cancer cases linked to vinyl chloride, only three victims remain alive, he said.

In addition, experimental tests conducted by Industrial Bio-Test Laboratories of Northbrook, Ill., and by Prof. Cesare Maltoni of Bologna, Italy, have strengthened the be-

lief that vinyl chloride causes cancer.

In a just-released telegram to John Stender, head of the Occupational Safety and Health Administration in the Department of Labor, Maltoni reported that vinyl chloride produced "zybal gland carcinomas, nephroblastomas, angiosarcomas of liver and other sites, skin carcinomas and probably hepatomas and neuroblastomas" in rats.

In another experiment, Maltoni said, more than 60 mice were exposed to 50 parts per million of vinyl chloride for seven months. After 49 weeks of dosage, he said, "we have

observed nine mammary carcinomas, two liver fibro-angiosarcomas, and two subcutaneous angiosarcomas."

As a result of the Maltoni and Bio-Test Laboratory experiments, plus the known cases of liver cancers in humans exposed to vinyl chloride, the Occupational Safety and Health Administration concluded that "our present judgment is that vinyl chloride is a carcinogenic agent."

In April, the agency issued an emergency standard limiting vinyl chloride air levels to 50 parts per million—the same daily dosage administered to Maltoni's mice. Now the agency proposes to reduce allowable vinyl chloride air levels to less than one part per million, the so-called "no detectable level" standard.

A key objection from the plastics and chemical industry is the feasibility of meeting the "no detectable level" standard. Vittone said, "Such a commitment cannot be accomplished overnight since, in certain areas, the technology for accomplishing it is, as yet, not developed, and when developed, facilities must be installed requiring time for engineering, procurement and installation."

Ralph L. Harding Jr., president of the plastics associa-

tion, said the companies "are sincerely concerned with providing all appropriate and necessary safeguards."

The plastics association cited a study by the Arthur D. Little company of Cambridge, Mass.: "An immediate shutdown of all polyvinyl chloride resin plants in the U.S. and the subsequent unavailability of PVC resin could result in a loss of 1.7 (million) to 2.2 million jobs in consuming and related industries and a loss of domestic production value of \$65 (billion) to \$90 billion annually."

Vinyl chloride goes into the manufacture of such diverse products as sporting goods,

packages, phonograph records, electric insulation, floor tiles, clothing and paints.

While fewer than 7,000 American workers are directly involved in making vinyl chloride and turning it into polyvinyl chloride, scientists suspect that hundreds of thousands of associated workers may be exposed to the danger. Dr. Irving J. Selikoff, who was instrumental in linking asbestos to cancer, said "the hazard might not stop at the factory gate but ... might invade workers' homes and the neighborhoods about vinyl chloride-polyvinyl facilities, (and) ... transport and storage might present unsuspected risks."

Vinyl Chloride Exposure Limit Is Opposed by Plastics Industry

By JANE E. BRODY

Special to The New York Times

WASHINGTON, June 25 — Representatives of the plastics industry pressed today for a relaxation of proposed Federal rules governing worker exposure to vinyl chloride, a chemical that has been linked to 21 cases of a rare, fatal liver cancer.

Industry spokesmen said that the proposed standard was medically unnecessary, technologically unfeasible and would lead to the loss of as many as 2.2 million jobs.

At the opening of what is expected to be a long Labor Department hearing on the proposed new standard of no exposure to detectable levels of the widely used chemical, industry spokesmen clashed with representatives of labor and Government and university scientists who testified that even stricter standards than those proposed must be implemented to protect the health of hundreds of thousands of American workers.

The debate today illustrated the difficulties faced by the Labor Department's Occupational Safety and Health Administration in protecting workers in the face of industry opposition. Until the new vinyl chloride standard was proposed last month, the three-year history of Administration action has leaned toward capitulation to industry demands.

Emergency Limit Set

Currently, the industry is operating under an emergency temporary exposure limit of 50 parts of vinyl chloride per million parts of air, a level that has been shown to cause angiosarcoma, a liver cancer, in rats and mice in studies conducted by industry and university scientists.

Although scientists from the National Cancer Institute testified that there was no known safe level of a cancer-causing agent, the Society of the Plastics Industry proposed in prepared testimony an average daily exposure limit of 25 parts per million a maximum momentary exposure of 40 parts per million, for workers exposed to vinyl chloride in the process of transforming it into polyvinyl chloride.

This standard, according to the industry plan, would be gradually reduced to a daily average of 10 parts per million with maximum exposure of 25 parts per million by October, 1976.

Somewhat stricter standards were proposed for workers engaged in the synthesis of vinyl chloride, a sweet-smelling gas. But for those workers who fabricate polyvinyl chloride into any of thousands of consumer and industrial products, the industry said that no vinyl chloride standards should be applied.

Scientists from the National Institute for Occupational Safety and Health noted, however, that earlier this month two cases of angiosarcoma of the liver were uncovered in employees in fabrication plants in Connecticut.

The plastics industry's position was outlined by Anton Vittone, president of the B. F. Goodrich Chemical Company, where the vinyl chloride cancer risk was first uncovered last January. Mr. Vittone, chairman of the industry's committee of vinyl chloride and polyvinyl chloride producers, said in his prepared statement, "The committee is unanimous in its position that the proposed standard is not technologically feasible and, if adopted, would shut down the industry."

Mr. Vittone said, "There is no data showing that exposure levels as provided for under the emergency standards are not safe or of low degree of risk." He noted further that the rats exposed at 50 parts per million got cancer only after a life span equivalent to 80 years in man.

An industry news release stated that later testimony would show that enforcement of the no-exposure standard could result in an over-all loss of 2.2 million jobs.

Labor representatives decried these statements as "black-mail" that ignores "overwhelming medical evidence." Peter Bommarito, president of the United Rubber Workers Union, said that workers' lives were more important than any product.

23217095

U.S. Unit Defends Vinyl Chloride Curbs, Saying They Aren't Too Hard on Firms

By a WALL STREET JOURNAL Staff Reporter

WASHINGTON — A Labor Department report disputed the plastics industry's claim that a proposed government standard for restricting handling of vinyl chloride would force numerous plastics plants to close.

The industry has contended that the proposed ruling, which would bar exposing workers to any "detectable" amount of the chemical, can't feasibly be met, and the industry warns that adoption of the ruling would close down the large part of the plastics industry that uses vinyl chloride and its derivatives as raw materials.

But the government report says flatly that evidence to date doesn't indicate "that promulgation of the proposed standard will stop vinyl chloride production and use."

The report, a draft version of an environmental impact study on the proposed strict vinyl chloride standard, was made public yesterday at the start of a week of hearings on the standard. The hearings are expected to be dominated by plastics-industry spokesmen questioning the scientific research on vinyl chloride and warning of economic disruption if the standard is issued.

Vinyl chloride, a gas, is thought to be responsible for 21 world-wide cases of a rare and fatal liver cancer, angiosarcoma. Tens of thousands of U.S. workers are directly and indirectly exposed to the chemical daily because it is the base product from which companies make polyvinyl chloride, a powdery substance used to form a multitude of everyday plastic products.

In April, the Labor Department cut workers' allowable exposure to vinyl chloride to 50 parts per million in the air they breathe. The proposed rule being debated at the hearings would slash that further, barring any "detectable exposure."

The study concedes that "production in some plants could be curtailed if reengineering is required," and it predicts "marginal" companies may need federal loans to help pay for improvements. But it says equipment needed to meet the standard doesn't necessarily need to be elaborate, and much progress can be made by improving "poor housekeeping and inadequate maintenance." It concludes that "the technology appears to be readily available," and thus "substantial development costs" won't be needed.

The contradictory industry position,

which warns of economic chaos, was attacked at the hearings by the AFL-CIO as "blackmail." Peter Bommarito, president of the United Rubber Workers Union, said, "This country survived for nearly two hundred years without polyvinyl chloride and we can survive in the future without it." But he also disputed industry contentions that the standard would end polyvinyl chloride output saying older plants can be altered, and in new plants the task of meeting the standard is a problem "characterized by the will, not the ability, to do the job."

Mr Bommarito also accused the industry of trying to whip up a "hysterical" public relations campaign predicting the demise of the industry, and he said the AFL-CIO will call for a congressional investigation of the industry's public relations effort.

The industry also proposed its own standards for handling vinyl chloride. Instead of barring any "detectable exposure," it urged gradually decreasing exposure ceilings, starting with 40 parts per million this year in polyvinyl chloride plants to be decreased to 25 parts in late 1976.

In plants handling raw vinyl chloride, the industry plan calls for a 25-parts-per-million ceiling this year, decreasing to 10 parts per million by 1977. In both kinds of plants, actual average exposure over an eight-hour day would be less than the full ceiling, due to differing emissions of the chemical at different times of day.

There also was evidence at the hearings, however, that even average exposures below a 10-parts-per-million level can cause disease. Dr. Irving Selikoff, noted occupational health researcher, reported he has found noncancerous liver diseases among workers at a Dow Chemical Co. plant in Michigan where levels of average exposure last year were generally below 10 parts. He cautioned, however, that it wasn't known whether the diseases were contracted before or after exposure was dramatically lowered by Dow in the early 1960s.

The study also claims that the construction and interior finishing sectors would be particularly hard-hit, because of their high degree of dependency on PVC testing. Production of PVC testing equipment in the United States would also occur in the same regions, and in-
 100

Journal of Commerce Staff

WASHINGTON — Proposed government limits on worker exposure to vinyl chloride are not technologically feasible and could cause the loss of more than two million jobs, plastics industry spokesmen warned yesterday as several days of Labor Department hearings on the standards be-

opening liver flukes. A study was conducted in the United States, where the prevalence of liver flukes in sheep was found to be 10 per cent. The study was conducted in the United States, where the prevalence of liver flukes in sheep was found to be 10 per cent.

Industry spokesmen urged that alternative standards be adopted instead, which they said would be more realistic and give factories ample time to comply. They suggested that a ceiling of 40 PPM be self-effective Oct. 5, with a maximum allowable daily time-weighted average of 20 PPM. On Oct. 5 of next year the ceiling would become 20 PPM, with no time-weighted average. On Oct. 5, 1976 a maximum time-weighted average of 10 PPM would go into effect, with the ceiling remaining at 20 PPM.

The above standards would apply to polyvinyl chloride in plants. Slighter cut points in plants were increased for vinyl chloride monomer producing plants. There, the industry said, a ceiling of 20 PPM should go into effect in October with a 10 PPM ceiling being added in three years. A maximum time-weighted average of 10 PPM would apply and the ceiling lowered to 5 PPM in 1977.

Mr. Webster made a few
 points of the same nature
 before the Convention, and
 the Convention then adjourned
 until the 10th inst.

Other Testimony

Other Testimony

BALTIMORE, MD.

THE SUN, Friday, June 21, 1974

Job loss feared from vinyl curb

Washington (Reuter)—More than 1.6 million Americans might lose their jobs if proposed government regulations for reducing hazards in vinyl chloride production are put into effect, a plastic industry study published yesterday said.

Vinyl chloride, used in products such as car upholstery and phone equipment, has been linked recently with 16 deaths in the United States caused by a rare type of cancer of the liver among workers in the industry. Five deaths have been reported elsewhere.

The study, commissioned from economic consultants Arthur D. Little, Inc., by the Society of the Plastics Industry, said at least 1.6 million Americans could be thrown out of work in various industries if the government's steps were implemented.

23217098

Aluminum producers buy time on bauxite

With only mild public protests, the major U.S. aluminum companies—Aluminum Co. of America, Reynolds Metals, and Kaiser Aluminum—this week submitted to the will of the Jamaican government. They agreed to increase the tax and royalty payments on their bauxite mining and alumina processing activities in Jamaica this year from \$25-million to \$200-million. The result will be higher prices for aluminum products in the U.S.

In effect, they had no choice. The U.S. aluminum companies have a gross capital investment in Jamaica of \$800-million—which they could have lost if they had refused to bow to the Jamaican government's order. Even more important, Jamaican bauxite and alumina supplies today account for a critical 40% of the aluminum produced in this country.

"We will pay the additional revenues... but will do so under protest," acknowledges John D. Harper, chairman and chief executive officer of Alcoa. Along with Reynolds and Kaiser, Alcoa has requested that the International Centre for Settlement of Investment Disputes (a body formed under the auspices of the World Bank) rule on the legality of the Jamaican government's increased tax and royalty action which, the companies claim, breaches long-term contract agreements.

While the investigation proceeds, however, the increased payments will be made. And this, plus a growing shortage of aluminum in the U.S., could force the price of aluminum ingot, now running at 33½¢ per lb., up to 36¢ by August and maybe as high as 40¢ by yearend.

Where it hurts. Because they do not depend equally on Jamaican bauxite and alumina, the big U.S. aluminum producers will not be equally hurt by the Jamaican tax boosts. Alcoa, for example, will have to pay only an additional \$21-million because it gets only about 15% (or 775,000 short tons) of its alumina from Jamaican bauxite.

For Kaiser and Reynolds, the increase will be a much tougher pill to swallow. Reynolds gets 60% of its bauxite from Jamaica, and its royalty bill "will climb to about \$50-million gross before any tax effect, based on estimated production of about 4.5-million short tons this year," says Richard S. Reynolds, Jr., president and board chairman. Reynolds, the largest U.S. user of Jamaican bauxite, pays export taxes



Alcoa's Harper: Aluminum expansion will more likely be in the U.S.

not only on the 3.4-million tons of Jamaican bauxite it ships to its U.S. plants each year but also on 1.1-million tons of ore it sends to the Jamaican alumina plant it owns with Kaiser and Anaconda Copper.

The Kaiser bite will be somewhat smaller—an additional \$46-million payment. But between 70% and 75% of Kaiser's U.S. alumina requirements are totally dependent on Jamaican bauxite. So the effect on the company's over-all costs—and thus on its prices—cannot fail to be more sweeping.

Looking elsewhere. Over the longer haul, though, the Jamaican tax boost could force even more important changes in the U.S. aluminum industry.

The outlook is for higher prices for aluminum products in the U.S.

"Bauxite may well be pricing itself out of the market," concedes Alcoa's Harper. "This doesn't mean that we are walking away from Jamaica. But it means that our future expansion will more likely be in the U.S."

Aluminum, he continues, is a very common element in the earth's crust. It is contained in anorthosite, in laterite ore, in clay, and there are big amounts in coal mine wastes.

"We will not go ahead with domestic ores until we have demonstration plants built," says Harper. "And then it will take two to three years to get new facilities operating." But implicit in the active interest of U.S. aluminum producers in developing alternate sources of aluminum is the knowledge that other bauxite-rich countries in the Caribbean and Africa may not be long in following Jamaica's lead in demanding far higher taxes on bauxite. ■

The spreading fight over vinyl chloride

In May, the federal Occupational Safety & Health Administration issued a proposed standard that would limit the concentration of vinyl chloride in a plant's atmosphere to "no detectable level"—in practice, about one part per million. Next week, producers and users of this chlorinated hydrocarbon, which is the monomer used to make polyvinyl chloride (PVC), industry's most versatile plastic, will square off against OSHA at public hearings in the hope of squashing the new standard.

Already, OSHA has extended the Washington hearings beyond the four days originally scheduled. Some witnesses have asked for as much as three hours to testify. Controversy is hardly new to OSHA, which has seen most of its standards hotly contested, but this, says an official, "is going to be the biggest show we've ever had."

The fight is over OSHA's attempt to protect workers against angiosarcoma, a rare form of liver cancer. Vinyl chloride, normally a gas, has long been a suspected carcinogen, and European scientists had previously reported tumors in rats exposed to heavy doses. Then in January, B. F. Goodrich Chemical Co. reported that several of its long-time vinyl workers had died of angiosarcoma. OSHA quickly dropped the previous exposure limit of 500 ppm to 50 ppm as a temporary measure. In April, studies sponsored by the Manufacturing Chemists Assn. showed that 2 of 200 rats exposed seven months to 50 ppm developed tumors. Meanwhile, the number of confirmed deaths due to angiosarcoma among vinyl workers, worldwide, has reached 21. "And we've only begun to look at the problem," says William Lloyd, head of the health surveillance office of the National Institute of Occupational Safety & Health (NIOSH).

Under the proposed standard, workers exposed to detectable amounts of vinyl chloride would have to wear respirators. But, as it did in earlier standards, OSHA says it will insist, where feasible, on engineering controls and work practices that avoid contamination of the air in the first place.

Crippling standard. The vinyl industry's position is, first, that rat tests to date do not prove the need for a 1-ppm limit for human beings, and second, that such a limit is technologically and economically not feasible. The Society of the Plastics Industry (SPI) has called the proposed standard "excessively and

unrealistically restrictive." Anton Vittone, Jr., president of B. F. Goodrich Chemical, states bluntly that the 1-ppm level "cannot be obtained at this time or in the future." A spokesman for Firestone Tire & Rubber Co. puts the case more strongly: The standard, he says, "would literally cripple this industry."

The threat, moreover, is not confined to those companies that make the monomer and the polymer. The standard, says Vittone, "could displace not only the 6,500 vinyl chloride workers and PVC production workers, but also hundreds of thousands of other employees in the companies that use PVC." Some 5-billion lb. of the plastic was used in the U. S. last year to make such products as pipe, wire insulation, packaging film, and floor tiles.

The danger to PVC processors lies in the small amounts of unreacted vinyl chloride that remain in the polymer. That danger took on added weight last week with reports of deaths due to liver cancer of two Connecticut PVC workers. One had worked on a General Electric Co. wire-coating line in Bridgeport, the other on a fabric-coating line at Ross & Roberts, Inc., in Stratford. "We're afraid the problem extends far out into the plastics industry," says NIOSH's Lloyd.

Disputed report. No one has had time to calculate fully the economic impact that the new standard could have, but SPI this week released some preliminary findings of a study made for it by Arthur D. Little, Inc. ADL researchers figure that a shutdown of vinyl producers would result in a loss of at least 1.6-million jobs and \$35-billion in annual sales. Hardest hit would be the automotive and construction industries, heavy PVC users. ADL is studying the possible use of substitutes for PVC in some applications and will present its findings at next week's hearings.

Even in advance of the SPI report, however, Sheldon Samuels, director of occupational health, safety, and environmental affairs of the AFL-CIO, called it "meaningless." The report, he says, assumes that the standard cannot be met. "But we're getting data showing that the standard can, in fact, be met." His data show, Samuels says, that plants making less than 100-million lb. a year of vinyl chloride will have to resort to respirators; plants of 100-million lb. to 200-million lb. can afford to put in engineering controls; and larger plants could be made "airtight."

The AFL-CIO says it is determined to fight for the tough standard even if it does mean throwing some people out of work. But Peter Bommarito, president of the United Rubber Workers' union, echoes Samuels' confidence. Industry, he says, is trying to "scare everybody about losing a job."

MONEY & CREDIT

A new set of rules for floating currencies

"We hope we have taken a first step back toward more stability in currencies," said a central banker fresh back in Europe from last week's Committee of 20 monetary reform negotiations in Washington. That first step was an agreement on some rules for managing today's floating exchange rates, and this week monetary authorities in both the U. S. and abroad were mulling over how to make those rules work.

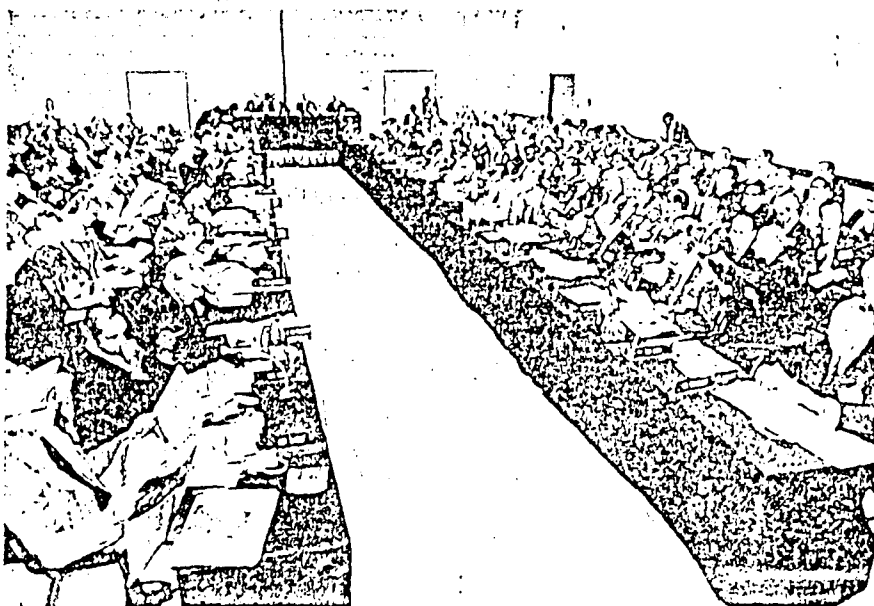
There is no longer a prayer of the sort of full-scale reform that govern-

money from newly rich oil nations that will help poorer lands pay their oil bills.

Most significant, though, was the agreement on rules for floating. Much of the technical side of these rules remains to be worked out, and there is no guarantee that nations will follow the rules. The IMF will help draft them, but it cannot force a government bent on competitively devaluing to obey them. "The rules simply express a hope," as one central banker sees it.

Tinkering. The aim of these rules for floating is to insure that governments avoid competitive devaluations that might damage the exports of other nations. Technically, the rules went into effect last week. In practice, it will be a while before they are applied, and there probably will be tinkering with the present relationship of rates first.

In coming months, governments in bilateral talks with the IMF staff will



Delegates from 20 nations conferred on money at a two-day meeting in Washington.

ments had in mind when they created the C-20 two years ago: a dramatic return to fixed exchange rates. "We'll never see the 'big reform'—just a lot of small steps," says one European.

Yet in a world of floating rates, roaring inflation, and deteriorating economies, even small steps look important. At the least, the negotiators have insured that international monetary cooperation is not dead. Faced with the unpleasant prospect of returning home empty-handed, the officials buckled down in Washington and reached some substantive agreements. Further, the Washington meeting produced a much-strengthened International Monetary Fund. The IMF has a new, more attractive special drawing right (SDR) to hand out—one that will be of use not only in government but in private transactions as well. And the IMF gets to manage a \$3-billion "oil facility"—

work out confidential "target zones"—or ranges of fluctuation—for each currency. Thereafter, a government would be obliged to keep its currency trading within these zones—intervening if necessary to keep it there. If a government wants to change its zone, either to correct a past mistake or to accommodate future economic policy, it will be expected to consult with the IMF. And the fund staff, based on its own models, may suggest when it thinks it is time for a government to move a zone up or down a bit.

The IMF can only suggest—not order. It does get some muscle from the creation of a new, ministerial-level interim consultative committee. This committee, including the same 20 ministers who made up the Committee of 20, is to meet yearly to supervise the implementation of the rules for floating. The committee per se will have no real

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On Levels Of Vinyl Chloride In Factory Air

Plastics Industry Protests Stricter Rules

U.S. TIMES, WASHINGTON POST
Special N. W. Service

WASHINGTON — The American plastics industry warned yesterday that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2 million jobs and \$20 billion in annual production.

Anton Vittone, president of B.F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could "virtually shut down his industry."

Vittone appeared at a public hearing with scores of other industry representatives to oppose implementation of new regulations, which would limit factory air levels of vinyl chloride to less than one part per million—so small as to be undetectable.

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In April, the agency issued an emergency standard limiting vinyl chloride-air levels to 50 parts-per-million—the same daily dose administered to Maltoni's mice. Now the agency proposed to reduce allowable vinyl chloride air levels to less than one part per million, the so-called "no detectable level" standard.

A key objection from the plastics chemical industry is the feasibility of meeting the "no detectable level" standard. Vittone said, "Such a constraint cannot be accomplished overnight in certain areas, the technology for accomplishing it is, as yet, not developed, and when developed, facilities must installed require time for engineering procurement and installation."

Ralph L. Harding, Jr., president of plastics association, said the companies "are sincerely concerned with providing all appropriate and necessary safeguards. They have already achieved substantial improvement in their operations. Now, has to round them off their responsibilities to their fellow workers."

HILL AND KNOWLTON, INC.

101L1282

Less Vinyl Chloride Exposure Is Opposed

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases world-wide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced

to close immediately, resulting in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

DANVILLE, VA.
BEE
D. 17,000

JUN 25 1974 *EJL*

On Vinyl Chloride

Industry Urges Reducing Controls

By DAVID HESS
Beacon Journal Washington Bureau

WASHINGTON — Warning of industry shutdowns if strict controls on vinyl chloride are adopted, a spokesman for the plastics makers Tuesday called for a phased reduction of vinyl chloride particles in the air in their plants.

Anton Vittone, president of B. F. Goodrich Chemical Co. and chairman of the Society of the Plastics Industry Vinyl Chloride committee, testified at the opening hearings on a proposed health and safety standard for vinyl chloride workers.

Vittone asked the Federal Occupational Safety and Health Administration (OSHA) to phase in a new standard over the next three years rather than put a permanent standard into effect this fall.

UNDER an existing emergency standard set in April by OSHA, vinyl chloride makers must keep the chemical levels down to 50 parts per million.

Labor union officials and industrial hygienists urged OSHA to stick to a proposed permanent standard, to go into effect in October, of "no detectable level" of vinyl chloride in factory working spaces.

Vittone told Department of

Labor officials at the hearings that "the proposed permanent standard is not technologically feasible and, if adopted, would shut down the industry." It could cost as many as 2.2 million jobs, industry spokesman said.

Prolonged exposure to vinyl chloride has been closely linked to a rare form of liver cancer, as well as to other organic diseases. Twenty-one deaths from liver cancer have struck vinyl chloride workers.

DR. IRVING Selikoff, medical professor at Mt. Sinai School of Medicine in New York and a recognized authority on industrial diseases, told hearing examiners:

"Clinical examinations of 354 workers exposed to vinyl chloride ... demonstrated a significant prevalence of liver abnormalities, peripheral vascular (vein) changes and lung abnormalities. The latter may reflect exposure to polyvinyl chloride dust, rather than to the monomer gas."

Dr. H. F. Kraybill, a staffer at the National Cancer Institute, testified that experiments with rats, mice and hamsters by the Manufacturing Chemists Association also linked vinyl chloride to liver cancers at relatively low levels of concentration in the air.

AKRON BEACON JOURNAL
AKRON, OHIO
D. 175,433 SUN. 203,113

JUN 26 1974 *EJL*

23217102

KNOXVILLE, TENN.
JOURNAL
D. 67,000

JUN 26 1974

Health Rule Would Ruin Industry, Moans Official

WASHINGTON (AP) — Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

The AFL-CIO called the warning blackmail and accused the industry of "ignoring the overwhelming medical evidence" linking vinyl chloride to cancer among workers handling the chemical.

Vinyl chloride, a gas, is converted into polyvinyl chloride, a white powdery chemical resembling sugar, which is used in the manufacture of plastic products ranging from toys, food packaging, floor tiles, pipes, auto parts and phonograph records.

United Rubber Workers President Peter Bommarito said the AFL-CIO supports at the risk of losing jobs, proposed federal regulations that would reduce worker exposure to vinyl chloride in plants to "no detectable level."

He represented the AFL-CIO as chairman of its health and safety committee at the opening of Labor Department hearings on the planned regulations. Temporary standards now in effect limit worker exposure to vinyl chloride to 50 parts per million, a sharp reduction from the previous 500 parts per million.

"This country survived for nearly 200 years without polyvinyl chloride and we can survive in the future without it," Bommarito declared. The industry had asserted that factories would be forced to close if the new regulations were adopted.

"This is not an easy position to take, but there is no alternative," Bommarito added. "We have both our jobs and our lives at risk."

Anton Vittone, chairman of the B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry Inc.

testified that the "no detectable level" is impossible to achieve and, if adopted, would shut down the industry.

Vittone offered a proposal to reduce by October, 1977, worker exposure to the chemical of 10 parts per million.

The industry submitted an independent study showing that an immediate shutdown of all polyvinyl chloride plants could result in the loss of between 1.7 and 2.2 million jobs in the plastics industry and other industries dependent on plastics products. This would result in lost production valued at between \$65 and \$90 billion a year, the study said.

This was disputed by the Labor Department's Occupational Safety and Health Administration in an environmental impact statement.

The report said there was no evidence that adoption of the proposed regulations would stop vinyl chloride production and use. It added, however, that the existence of some marginal firms might be threatened if they are forced to raise prices to pay for safety measures.

Vinyl chloride has been used by the plastic industry since World War II. The government imposed the temporary emergency standard after the discovery earlier this year that exposure to the chemical may be a cause of angiosarcoma, a rare form of liver cancer.

Since January, 20 cases world-wide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

Dr. Irving J. Selikoff, who has been doing extensive research into the potential health hazard of vinyl chloride at the Mount Sinai School of Medicine in New York, testified that "the only prudent course" for preventing liver cancer among plastic industry workers is to reduce exposure to the no detectable level proposed by the government.

The San Diego Union

SAN DIEGO, CALIF.

D. 178,147 SUN. 292,966

JUN 21 1974

Job Losses Feared If Chemical Curbed

WASHINGTON (UPI) — The plastics industry said yesterday more than 2 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride, a suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc. said in a study released in advance of next week's Labor Department hearing into the problem.

The department's Occupational Safety and Health Administration has proposed

new rules to limit the exposure of workers in vinyl chloride plants to a zero level. The standards were proposed after cases of a rare liver cancer — 21 of them worldwide so far — began showing up among workers in such plants.

The industry said it cannot meet a zero level, and that it would be forced to shut down. While 6,500 workers are involved directly in plants which turn out vinyl

chloride gas, or its solid form, polyvinyl chloride, many thousands more depend on the plastics products to which the material is basic.

"The effect on the nation's economy . . . would be catastrophic. We expect that the final results (from the study) will show a potential loss in excess of 2 million jobs," said Ralph L. Harding, president of the society.

23217103

Plastics industry claims rules endanger 2.2-million jobs

Minneapolis Tribune
 MINNEAPOLIS, MINN.
 D. 2:30.275 SUN. 674.302

JUN 26 1974

Associated Press
 Washington, D.C.
 Witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

The AFL-CIO called the warning blackmail and accused the industry of "ignoring the overwhelming medical evidence" linking vinyl chloride to cancer among workers handling the chemical.

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He represented the AFL-CIO as chairman of its health and safety committee at the opening of Labor Department hearings on the planned regulations. Temporary standards now in effect limit worker exposure to vinyl chloride to 50 parts per million, a sharp reduction from the previous 500 parts per million.

"This country survived for nearly 200 years without polychlorinated and we can survive in the future without it," Romarino declared. The industry had asserted that factories would be forced to close if

the new regulations were adopted. Anton Vittone, chairman of the B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry Inc., testified that the "no detectable level" is impossible to achieve and, if adopted, would shut down the industry. Vittone offered a proposal to reduce by October 1977 worker exposure to the chemical of 10 parts per million.

The industry submitted an independent study showing that an immediate shutdown of all polychlorinated plants could result in the loss of between

1.7 and 2.2 million jobs in the plastics industry and other industries dependent on plastics products. This would result in lost production valued at between \$65 and \$90 billion a year, the study said.

This was disputed by the Labor Department's Occupational Safety and Health Administration in an environmental impact statement. That report said there was no evidence that adoption of the proposed regulations would stop vinyl chloride production and use. It added, however, that the existence of some marginal firms might be threatened if they are forced to raise

prices to pay for safety measures. Vinyl chloride has been used by the plastic industry since World War II. The government imposed the temporary emergency standard after the discovery earlier this year that exposure to the chemical may be a cause of angiosarcoma, a rare form of liver cancer.

Since January 20 cases worldwide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polychlorinated vinyl chloride.

The Washington Post
 WASHINGTON, D. C.
 D. 5:55.015 SUN. 710.143

JUN 26 1974

Proposed Vinyl Chloride Rules Hit as Costing 2 Million Jobs

By Tim O'Brien
 Washington Post Staff Writer
 The American plastics industry warned yesterday that proposed government rules to slash vinyl chloride levels in the workplace could cost the trade a key chunk in the production of 2.2 million jobs. The industry has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been rapidly accumulating.

Anton Vittone, president of the B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said he proposed health rules tested by the National Institute for Occupational Safety and Health, would virtually shut down the industry. He said the rules would eliminate jobs in the plastics industry, and he said the rules would eliminate jobs in the plastics industry, and he said the rules would eliminate jobs in the plastics industry.

Little company of Cambridge, Mass. "An immediate level" down of all polychlorinated vinyl chloride that hundreds of thousands of workers in the U.S. and associated workers may be exposed to. The subsequent unavailability of PVC resin could result in a loss of 1.7 million to 2.2 million jobs in the plastics industry, he said. "The industry must stop at the time of the production value of \$65 billion to \$90 billion annually."

While fewer than 100 American workers are involved in making vinyl chloride, the industry is a major supplier of the chemical to the rest of the world. The industry is a major supplier of the chemical to the rest of the world. The industry is a major supplier of the chemical to the rest of the world.

In addition, experimental studies conducted by Industrial Hygiene Laboratories of Northbrook, Ill., and by Prof. Cesare Maltoni of Bologna, Italy, have strengthened the belief that vinyl chloride causes observed lung cancer.

In a just-released telegram to John Stender, head of the Occupational Safety and Health Administration in the Department of Labor, Maltoni of liver cancer in humans. As the "no detectable level" standard proposed by the industry, the "no detectable level" standard proposed by the industry, the "no detectable level" standard proposed by the industry.

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CHARLESTON, S. C.
NEWS AND COURIER
D. 66,000 S. 81,500

JUN 21 1974 *R.H.K.*

Plastics Industry Says 1 Million Could Lose Jobs

WASHINGTON (UPI) — The plastics industry said Thursday more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride — the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc., said in a study released in advance of next week's Labor Department hearing into the problem.

The department's Occupational Safety and Health Ad-

ministration has proposed new rules to limit the exposure of workers in vinyl chloride plants to no detectable level. The standards were proposed after cases of a rare liver cancer — 21 of them worldwide so far — began showing up among workers in such plants.

The industry said that it cannot meet a zero-level, and the result of such a rule would be to force it to shut down. While only about 6,500 workers are involved directly in plants which turn out vinyl chloride gas, or its solid form, polyvinyl

chloride, many thousands more depends on the plastics products into which the material is turned.

"The effect on the nation's economy and on the social order in terms of the human hardship it would cause would be catastrophic. We expect that the final results from (the study) will show a potential loss in excess of 2 million jobs. This is all the more regrettable in light of the fact that the industry is taking every step to reduce worker exposure..." said Ralph L. Harding, president of the society.

AUTOMOTIVE
CHAIN STORE
AKRON, OHIO
MONTHLY 19,000

JUL 1974 *R.H.K.*

JOBS THREATENED BY REGULATION

At least 1.6 million Americans may lose their jobs if an unrealistic occupational health regulation, limiting worker exposure to vinyl chloride, forces a shutdown of the industry.

According to preliminary results of an economic impact study conducted for The Society of The Plastics Industry (SPI), a minimum of 1.6 million jobs would be lost if the producers of vinyl chloride, an industrial chemical, and polyvinyl chloride (PVC), a widely used plastic resin, were forced to shut down because the technology does not exist to meet a "no detectable level" of exposure. In addition, the cost, in terms of lost sales and pro-

duction, would amount to at least \$65 billion.

For example, the unavailability of PVC resin would have a major effect on the automotive industry, which utilizes PVC in the form of insulated wire and cable, component parts, upholstery, and many other products.

SPI says the automotive and construction industries would be the hardest hit, with losses respectively of at least 600,000 jobs and \$35 billion in sales; and for the construction industry, at least 500,000 lost jobs and \$14 billion in lost sales.

"The effect on the nation's economy and on the social order in terms of the human hardship it would cause would be catastrophic," said Ralph Harding, Jr., president of SPI.

YORK, PA.
DISPATCH
D. 44,500

JUN 26 1974 *R.H.K.*

Plastic Warning

Vinyl Chloride Ban Said Dangerous to Industry

LA Times, Washington Post News Service

WASHINGTON — The American plastics industry warned that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2.2 million jobs and \$90 billion in annual production.

Anton Vittone, president of B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could virtually shut down his industry.

Vittone appeared at a public hearing with scores of other industry representatives to oppose implementation of new regulations, which would limit factory air levels of vinyl chloride to less than one part per million — so small as to be undetectable.

In recent months, vinyl chloride—a key chemical in the manufacture of many plastics—has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been rapidly accumulating.

23217105

JUN 25 1974 *By Miller*

Goodrich spokesman testifies

'Zero-vinyl-chloride would kill industry'

PAGE ONE

By CHARLES R. BABCOCK
Courier-Journal & Times Staff Writer

WASHINGTON — A proposed "zero" standard for exposure to vinyl chloride would shut down his industry and mean the loss of more than 1.5 million jobs and billions of dollars in sales, a chemical-industry executive said today.

That was the testimony of Anton Vittone, president of the B. F. Goodrich Chemical Co., at today's opening round of hearings on a proposed federal standard that "no detectable level" of vinyl-chloride gas be permitted in the air in plastic plants where it's used.

Though the plastics-industry testimony was not scheduled until later today, The Society of the Plastics Industry released its proposal for a step-by-step reduction of permissible vinyl-chloride levels over a period of years.

The first government witnesses at the hearings were challenged sharply by plastics-industry attorneys.

The testimony of U. S. Department of Labor and National Cancer Institute officials that the new standard is necessary to protect plastic workers from exposure to the cancer-causing chemical was questioned by representatives of several companies. It appeared to be a concerted effort by the industry to get the "zero" limit revised.

The industry proposes a new standard to begin Oct. 5, when the Department of Labor's emergency standard that allows 50 parts of vinyl chloride per million parts of air expires. Under the industry proposal, an average daily level of up to 10 parts per million would be permitted without respiratory protection in plants where vinyl chloride is made, and 25 parts per million where polyvinyl chloride plastic is made—such as in the Louisville plant.

Levels above 25 parts per million in vinyl-chloride plants and above 40 parts per million in polyvinyl-chloride plants

would require the use of respiratory protection, Vittone's proposal said.

By October of 1976, the level of vinyl-chloride gas would be down to an average of 10 parts per million in polyvinyl-chloride plants. And by October 1977, the level would be reduced under the industry proposal to an average of 5 parts per million in vinyl chloride production plants.

The federal standard earlier permitted 500 parts of vinyl chloride gas per million parts of air. After the findings of cancer deaths, the standard was lowered to 50 parts per million on an emergency basis and then, last month, a federal job-safety agency advised that it could not "describe a safe exposure level" to vinyl chloride, and the "zero" standard was proposed.

"Such a commitment cannot be accomplished overnight since, in certain areas,

See NO-VINYL-CHLORIDE A

Back page, col. 2, this section

No-vinyl-chloride rule said to be fatal to industry

A
Continued From Page One

the technology for accomplishing it is, as yet, not developed," Vittone's statement said.

The plastics industry proposal also notes, "At this precarious state of its knowledge, The Society of the Plastics Industry believes that misplaced reliance on mere suspicions rather than proven data, or precipitous and emotional reaction to such incomplete information, together with a narrowly construed interpretation of interests, could lead to major economic consequences."

This industry concern was shown in its attorneys' questioning of today's first speakers at the Department of Labor's main auditorium.

Dr. Daniel P. Boyd, director of the Office of Standards Development for the Occupational Safety and Health Administration, reviewed the history of the con-

cern over vinyl chloride that started with the Goodrich announcement of two workers' deaths in Louisville in January. "Our present judgment is that vinyl chloride is a carcinogenic (cancer-producing)," Boyd said. He noted that 19 deaths, including 13 in this country, have been linked to working with the chemical.

And Boyd added that the most recent data from Italian researcher Cesare Maltoni shows that other cancers besides the rare liver cancer, angiosarcoma, have been found in laboratory rats and mice exposed to the current emergency standard of 50 parts per million for periods of less than a year.

Dr. Herman Kraybill, of the National Cancer Institute, then said that preliminary medical data from Maltoni and other sources shows that vinyl chloride could cause cancer in perhaps 5 per cent of the persons exposed to it.

The hearings will continue all week.

And the federal job-safety agency's Dr. Boyd emphasized at the beginning of today's hearings that "we regard the proposed standard as just that—a proposal."

23217106

The Evening Bulletin
PROVIDENCE, R. I.
D. 149,363

JUN 25 1974

By Keller

1.6 Million Vinyl Job Loss Feared

JUN 25 1974

By Keller

Industry Warning on Vinyl Chloride

1.6 Million Jobs to Go?

Associated Press
WASHINGTON — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery

earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases worldwide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry, Inc., contends that if the government's proposed level is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed level.

WASHINGTON, D.C. (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

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23217107

SAN GABRIEL, CALIF.
SAN GABRIEL VALLEY
TRIBUNE
D. 66,500 S. 68,000

JUN 2 6 1974

AIR STANDARD HIT

Plastics Industry In Dire Warning

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

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JUN 2 1 1974

Exposure To Vinyl Chloride

PAGE ONE

By Dennis Connaughton

The plastics industry is in a huff over reports linking vinyl chloride to cancer and the resultant possibility of stricter controls on the industry.

A report issued yesterday by the Society of Plastics Industry Inc. in Washington said more than 1.6 million Americans could lose their jobs if the government imposes tighter controls on industrial exposure to vinyl chloride—the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society said in a study released in advance of next week's Labor Department hearing into the problem.

The department's Occupational Safety and Health Administration has proposed new rules to limit the exposure of workers in vinyl chloride plants to no detectable level. The standards were proposed after cases of a rare liver cancer — 21 of them worldwide so far — began showing up among workers in such plants.

The industry said that it cannot meet a zero-level, and the result of such a rule would be to force it to shut down. While only about 6,500 workers are involved directly in plants which turn out vinyl chloride gas, or its solid form, polyvinyl chloride, many thousands more depends on the plastics products into which the material is turned.

"The effect on the nation's economy and on the social order in terms of the human hardship it would cause would be catastrophic. We expect that the final results from (the study) will show a potential loss in excess of 2 million jobs. This is all the more regrettable in light of the fact that the industry is taking every step to reduce worker exposure..." said Ralph L. Harding, president of the Society.

"If the proposed 'no detectable level' standard is adopted the vinyl chloride and polyvinyl chloride resin producing industries will be forced to close down immediately," he added.

Current temporary government rules limit exposure in factory air to 50 parts per million.

Vinyl chloride is used primarily to produce polyvinyl chloride (PVC) is in turn fabricated into a wide variety of products, including flooring, pipe, curtains, upholstery, phonograph records, telephone equipment, insulated wire, bottles, packaging, luggage, sporting goods and many others.

In May the Occupational Safety & Health Administration (OSHA) of the U.S. Department of Labor proposed that exposure of employees to vinyl chloride monomer (VCM) in workplace air should be reduced to "no detectable level."

VCM has been linked in recent months with higher than normal incidence of angiosarcoma of the liver, a rare type of cancer, among previously highly exposed workers.

23217108

POTTSTOWN, PA.
MERCURY
D. 25.500

JUN 21 1974

Bygones

Plastics Industry Fears Massive Job Losses Over Vinyl Chloride Controls

WASHINGTON (UPI) — The plastics industry said Thursday more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride — the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc., said in a study released in advance of next week's Labor Department hearing into the problem.

(Continued from Page One)

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(Continued on Page 10)

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The Hartford Courant
HARTFORD, CONN.

D. 170,459 SUN. 219,365

JUN 21 1974

Bygones

Chloride Control Held Threat to 1.6 Million Jobs

WASHINGTON (UPI) — The plastics industry said Thursday more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride — the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc., said in a study released in advance of next week's Labor Department hearing into the problem.

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23217109

THE KANSAS CITY STAR
KANSAS CITY, MO.
D. 308,862 SUN. 400,110

JUN 26 1974 *By Heller*

Job Loss Cited in Plastics Rules

Washington (AP)—The plastics industry says proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

That was one point to be made by the industry in a weeklong public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part a million—too little to be detected. The emergency standard now is 50 parts a million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide con-

trovery over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may cause a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Company disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died of the disease. Since then 20 cases worldwide have been linked to workers at plants where vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers produce vinyl chloride and turn it into polyvinyl chloride, a solid plastic used in pro-

ducts including paint, pipe, floor tile, toys, food packaging, phonograph records and clothing.

It had been thought the danger faced only workers at the first stage of the manufacturing process, but scientists have turned up evidence indicating that as many as 700,000 workers could be in danger.

Ninety-five witnesses, representing government, the medical community and plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry, Inc., contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.6 million jobs and \$65 billion.

Peter J. Brennan, secretary of labor, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry, employers and employees, and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50

parts a million but above the government's proposed level.

IRON AGE
RADNOR, PA.
W. 105,000

JUL 8 1974 *By Heller*

Vinyl chloride scare

The vinyl chloride scare is scaring a lot more people than just those directly exposed to the suspected cancer-producing chemical. About 1.6 million more, roughly speaking.

The number, says the Society of the Plastics Industry, Inc., matches the amount of jobs that would be eliminated if the government goes ahead with a plan to cut vinyl chloride plant emissions to zero level. One of the hardest hit, the Society predicts, would be the auto industry, with projected losses of 600,000 jobs and sales of \$35 billion.

Vinyl chloride, a toxic chemical, is used to make a wide variety of plastic

products, including automotive parts, wire coatings, vinyl roofs and car upholstery. Direct exposure to the substance has been linked with a rare form of liver cancer.

Under current standards set by the Occupational Safety and Health Administration, emission levels at producing plants are temporarily established at 50 ppm. However, the government is now considering a permanent OSHA proposal to limit ambient levels to "no detectable levels." Labor Dept. hearings on the proposal opened June 24.

23217110

JUN 25 1974 *Ry. 11/11*

Chemical Control Debated

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation of much of the modern plastics industry, is the center of a

growing worldwide controversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases world-wide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride, a solid plastic

used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,600 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting

in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

already in db
THE SUN
BALTIMORE, MD.
(MORNING)
D. 183,549 SUN. 351,849
JUN 21 1974 *Ry. 11/11*

The Hartford Times
HARTFORD, CONN.
D. 123,376 SUN. 122,857
JUN 21 1974 *Ry. 11/11*

Job loss feared from vinyl curb

Washington (Reuter)—More than 1.6 million Americans might lose their jobs if proposed government regulations for reducing hazards in vinyl chloride production are put into effect, a plastic industry study published yesterday said.

Vinyl chloride, used in products such as car upholstery and phone equipment, has been linked recently with 16 deaths in the United States caused by a rare type of cancer of the liver among workers in the industry. Five deaths have been reported elsewhere.

The study, commissioned from economic consultants Arthur D. Little, Inc., by the Society of the Plastics Industry, said at least 1.6 million Americans could be thrown out of work in various industries if the government's steps were implemented.

Plastic Industry Job Losses

Special to The Times

WASHINGTON — At least 1.6 million Americans may lose their jobs if an occupational health regulation, limiting worker exposure to vinyl chloride, forces a shutdown of the industry.

According to preliminary results of an economic impact study conducted for the Society of the Plastics Industry by the economic consulting firm of Arthur D. Little, Inc., a minimum of 1.6 million jobs would be lost if producers of the industrial chemical, and

Polyvinyl Chloride, a widely used plastic resin, were forced to shut down because the technology does not exist to meet a "no detectable level" of exposure. In addition, the cost in terms of lost sales and production would amount to at least \$65 billion.

Vinyl chloride is used primarily to produce PVC resin, which is in turn fabricated into a wide variety of products, including flooring, pipe, certain upholstery, phonograph record, telephone equipment, insulated wire, bottles,

packaging, luggage, sporting goods and many others.

Employing an economic model for its analysis, A.D. Little was able to estimate the impact on the resin industry itself, and in addition, the effect on other major segments of the economy by defining the interaction of the PVC industry with primary, secondary and final demand markets.

For example, the unavailability of PVC resin would have a major effect on the automotive industry, which utilizes PVC in the form of insulated wire

23217111

JUN 27 1974

Cancer Crackdown To Cost Jobs, Plastics Industry Says

By TIM O'BRIEN

WASHINGTON — The American plastics industry has warned that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2.2 million jobs and \$90 billion in annual production.

Anton Vittone, president of B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could virtually shut down his industry.

Vittone appeared at a public hearing with scores of other industry representatives to oppose implementation of new regulations, which would limit factory air levels of vinyl chloride to less than one part per million — so small as to be undetectable.

In recent months, vinyl chloride — a key chemical in the manufacture of many plastics — has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been rapidly accumulating.

Dr. Marcus M. Key of the National Institute for occupational Safety and Health, testified seven cases have been reported at a Goodrich plant in Kentucky, three at a Goodyear plant in New York, two at a Union Carbide plant in West Virginia and one case in a Firestone plant in Pennsylvania.

Of the 13 cancer cases linked

to vinyl chloride, only three victims remain alive, he said.

A key objection from the plastics and chemical industry is the feasibility of metering the "no-detectable level" standard.

Vittone said, "Such a commitment cannot be accomplished overnight since, in certain areas, the technology for accomplishing it is, as yet, not developed, and when developed, facilities must be installed requiring time for engineering, procurement and installation."

The U.S. Labor Department, in an environmental-impact statement, disputed the industry prediction of massive economic dislocations.

While noting that some

marginal firms may be affected, the department said there is no evidence the health rules would eliminate the production or use of vinyl chloride.

The AFL-CIO called the industry's economic warning a form of blackmail, charging the chemical companies have ignored "overwhelming medical evidence" about the vinyl-chloride danger.

The plastics industry is proposing exposure standards that would become gradually tougher.

Washington Post Service

POMPAHO BEACH, FLA.
SUN-SENTINEL
D. 33,500

JUN 21 1974

WASHINGTON — The plastics industry yesterday said more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride — the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc., said in a study released in advance of next week's Labor Department hearing into the problem.

The department's occupational safety and health administration has proposed new rules to limit the exposure of workers in vinyl chloride plants to no detectable level. The standards were proposed after cases of a rare liver cancer — 21 of them worldwide so far — began showing up among workers in such plants.

THE SUN
BALTIMORE, MD.
(MORNING)
D. 183,549 SUN. 351,849

JUN 26 1974

Chloride exposure cut argued

Washington — Government and labor witnesses disputed claims by the plastic industry yesterday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

The AFL-CIO called the warning blackmail and accused the industry of "ignoring the overwhelming medical evidence" linking vinyl chloride to cancer among workers handling the chemical.

Vinyl chloride, a gas, is converted into polyvinyl chloride, a white powdery chemical resembling sugar which is used in the manufacture of plastic products, including toys, food packaging, floor tiles, pipes, auto parts and phonograph records.

Peter Bommarito, the United Rubber Workers president, said the AFL-CIO supports, at the risk of losing jobs, proposed federal regulations that would reduce worker exposure to vinyl chloride in plants to "no detectable level."

Mr. Bommarito represented the AFL-CIO as chairman of its health and safety committee at the opening of Labor

23217112

EVENING TRIBUNE

SAN DIEGO, CALIFORNIA

D. 121,726

JUN 26 1974

Plastics job loss explained

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6-million jobs.

This was one of the points to be made by the industry during a public hearing at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B.F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases worldwide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making

vinyl chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.5-million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

CHEMICAL MARKETING
REPORTER

NEW YORK, N. Y.

D. 16,000

JUN 24 1974

Vinyl Industry Can't Live With 'No Exposure' Rule

At least 1.6 million Americans may lose their jobs if "an unrealistic health regulation limiting worker exposure to vinyl chloride forces a shutdown of the industry", according to preliminary results of an economic impact study conducted for Society of the Plastics Industry by Arthur D. Little, Inc., economic consultants.

The study says technology does not exist to meet a "no detectable level" of exposure. In addition to the jobs lost, it's estimated a shutdown would cost \$65 billion in terms of lost sales and production.

The A.D. Little study says automotive and construction industries would be hardest hit, with losses respectively of 600,000 jobs and \$35 billion in sales; and for the construction industry at least 500,000 jobs and \$14 billion in sales. Final results from the study are expected to show a potential loss in excess of 2 million jobs.

"If the proposed 'no detectable level' standard is adopted, the vinyl chloride and polyvinyl chloride resin producing industries will be forced to close down immediately," according to Ralph L. Harding, Jr., SPI president.

The possible use of substitute materials over a short term basis to replace PVC in some applications is currently under analysis by A.D. Little and will be presented at the public hearings on the standard, scheduled to be held by Occupational Safety & Health Administration in Washington beginning tomorrow (June 25).

In another development, Diamond Shamrock Corporation, a major PVC producer, said last week that preliminary results of an in-depth health study of 709 of its employees exposed to vinyl chloride monomer vapor in the past showed that none of them showed any evidence of angiosarcoma of the liver.

A study of health records of employees who had retired or left the company, as well as records of deceased employees, also showed no evidence of angiosarcoma.

Diamond says present exposure levels at its plants are within the 50-parts-per-million emergency standard set by OSHA and the firm says continuing technological and operating changes will further reduce levels, as early as March, 1975.

Diamond provides over 350 million pounds annually of PVC to a variety of industries, including automotive, pipe, construction and electrical and wire and cable

23217113

The Florida Times-Union
JACKSONVILLE, FLA.
D. 150,098 SUN. 172,515

Polyvinyl Firms Warn Of Job Cuts

WASHINGTON (UPI) — The Labor Department was told Tuesday it should not risk the jobs of 1.6 million Americans because of "over-reaction and inadequate and inconclusive information" about cancer deaths blamed on vinyl chloride.

Earle F. Webster, representing the Polyvinyl Chloride Belting Manufacturers Committee, said in testimony for department hearings on a proposed health standard that "serious economic disaster" could follow if it is adopted permanently.

Because scientists have linked 19 cases of angiosarcoma, a form of liver cancer, to exposure to vinyl chloride the government has proposed that workers should be exposed to "no detectable level" of vinyl chloride.

Vinyl chloride is a gas which is processed into a wide range of plastic products including telephone instruments, floor tiles, toys, bottles, and phonograph records.

DANIEL P. Boyd of the Occupational Safety and Health Administration told scores of lawyers and industry representatives at the opening round of hearings the department's proposal was justified.

He said that based on laboratory experiments "and the 19 cases of angiosarcoma found in persons ex-

posed to vinyl chloride, our present judgment is that vinyl chloride is a carcinogenic agent."

A carcinogenic agent is one that induces cancer.

Boyd said the department was aware of the costs that might be involved in ridding vinyl chloride from the worker's environment, but "the proper application of ventilation systems and further enclosure of exposure sources, appears to be a rational approach."

"Where the vinyl chloride cannot be removed by ventilation, workers should be equipped with respirators and protective clothing and the gas should be enclosed in a regulated area."

AND, HE SAID, in spite of employer opposition to posting labels and signs using the word "cancer," such signs should be required "to ensure that employees are apprised of all hazards to which they are exposed."

Ralph L. Harding Jr., president of the Society of the Plastics Industry, said if the government standard is adopted "the vinyl chloride and polyvinyl chloride resin-producing industries will be forced to close down immediately."

"At least 1.6 million Americans may lose their jobs if an unrealistic occupational health regulation" is imposed, he said.

THE REPORTER DISPATCH
WHITE PLAINS, N.Y.
(NEW YORK CITY MARKET AREA)
D. 46,656

JUN 26 1974

newsletter

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loun the dion clonk
ylhonakly olo olo
ol olo ylla loc
cyllon olonakly olo flol ylla loc

Commentary



Trends

✓ At least 1.6 million Americans may lose their jobs if an unrealistic occupational health regulation limiting worker exposure to vinyl chloride forces a shutdown of the industry, according to the Society of the Plastics Industry. It says the technology does not exist to meet a "no detectable level" of exposure.

✓ Vinyl chloride linked to a form of cancer found among highly exposed workers, is used primarily to produce PVC resin, which is in turn fabricated into a wide variety of products, including flooring, pipe, curtains, upholstery, phonograph records, telephone equipment, insulated wire, bottles, packaging, luggage and sporting goods.

✓ The AFL-CIO is urging severe restrictions on exposure of workers to vinyl chloride, however, even if it means a massive loss of jobs.

WALL STREET JOURNAL
NEW YORK, N. Y.
D. 518,065

JUN 28 1974

Corrections & Amplifications

SOCIETY OF THE PLASTICS INDUSTRY said its proposal for reducing atmospheric concentrations of vinyl chloride in plants handling the chemical in raw form calls for a limit of 10 parts per million by 1975. In a story printed in an earlier edition, the trade association incorrectly stated its proposal calls for such a reduction by 1977.

23217114

The Washington Post
WASHINGTON, D. C.
D. 535,016 SUN. 710,148

JUN 21 1974

Plastics Firms Hit Curbs

United Press International

The plastics industry said yesterday that more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride—the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry, Inc., said in a study released in advance of next week's Labor Department hearing into the problem.

The department's Occupational Safety and Health Administration has proposed new rules to limit the exposure of workers in vinyl chloride plants to no detectable level. The standards were proposed after cases of a rare liver cancer—21 worldwide so far—began showing up among workers in such plants.

The industry said that it cannot meet that exposure

level, and the result of such a rule would be to force it to shut down. While only about 6,500 workers are involved directly in plants which turn out vinyl chloride gas, or its solid form, polyvinyl chloride, many thousands more depends on the plastics products into which the material is turned.

Current temporary government rules limit exposure in factory air to 50 parts per million.

Morning News
WILMINGTON, DEL.
D. 44,027

JUN 21 1974

Industry warns of restrictions

WASHINGTON (UPI) — The plastics industry yesterday said that more than 1.6-million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride—the suspected cancer-causing chemical. Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc., said in a study released in advance of next week's Labor Department hearing into the problem. The department's occupational safety and health administration has proposed new rules to limit the exposure of workers in vinyl chloride plants to no detectable level.

THE ARIZONA REPUBLIC
PHOENIX, ARIZ.
D. 211,962 SUN. 318,839

JUN 21 1974

1.6 million face job loss in plastic-control plan

United Press International

WASHINGTON — The plastics industry said Thursday more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride — the suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc., said, in a study released in advance of next week's Labor Department hearing into the problem.

The Labor Department has proposed rules to limit the exposure of workers in vinyl chloride plants to no detectable level. The standards were proposed after cases of a rare liver cancer — 21 worldwide — began showing up among workers in such plants.

The industry said it cannot meet zero level, and the result of such a rule would be to force it to shut down. While only about 6,500 workers are involved directly in plants that produce vinyl chloride gas, or its solid form, polyvinyl chloride,

many thousands depend on the plastics products into which the material is turned.

"We expect that the final results from (the study) will show a potential loss in excess of 2 million jobs. This is all the more regrettable in light of the fact that the industry is taking every step to reduce worker exposure," said Ralph L. Harding, president of the society.

23217115

JUN 26 1974 *Bj*

Job Loss, Chemical Limit Claims Disputed

Washington (AP)

Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

The AFL-CIO called the warning blackmail and accused the industry of "ignoring the overwhelming medical evidence" linking vinyl chloride to cancer among workers handling the chemical.

Vinyl chloride, a gas, is converted into polyvinyl chloride, a white powdery chemical resembling sugar, which is used in the manufacture of plastic products ranging from toys, food packaging, floor tiles, pipes, auto parts and phonograph records.

United Rubber Workers President Peter Bommarito said the AFL-CIO supports at the risk of losing jobs, proposed federal regulations that would reduce worker exposure to vinyl chloride in plants to "no detectable level."

He represented the AFL-CIO as chairman of its health and safety committee at the opening

of Labor Department hearings on the planned regulations. Temporary standards now in effect limit exposure to vinyl chloride to 50 parts per million, a sharp reduction from the previous 500 parts per million.

"This country survived for nearly 200 years without polyvinyl chloride and we can survive in the future without it," Bommarito declared. The industry had asserted that factories would be forced to close if the new regulations were adopted.

"This is not an easy position to take, but there is no alternative," Bommarito added. "We have both our jobs and our lives at risk."

Anton Vittone, chairman of the B. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry Inc., testified that the "no detectable level" is impossible to achieve and, if adopted, would shut down the industry.

Vittone offered a proposal to reduce by October, 1977, worker exposure to the chemical of 10 parts per million.

DAILY NEWS RECORD
NEW YORK, N. Y.
D. 25,000JUN 26 1974 *Bj*

WARNING: At least 1.6 million Americans may lose jobs if occupational health regulation limiting worker exposure to vinyl chloride forces shutdown of industry. According to preliminary results of an economic impact study done for Society of the Plastics Industry (SPI) by Arthur D. Little, Inc., economic consulting firm, a minimum of 1.6 million jobs would be lost if producers of vinyl chloride were forced to shut down because technology doesn't exist to meet a "no detectable level" of exposure. In addition, cost in terms of lost sales and production would amount to at least \$65 billion.

The Dallas Morning News
DALLAS, TEXAS
D. 266,667 SUN. 310,530

JUN 23 1974 *Bj*

Vinyl Chloride Control Called 'Catastrophic'

WASHINGTON (UPI) — The plastics industry said more than 1.6 million Americans could lose their jobs if the government imposes stricter controls on industrial exposure to vinyl chloride — a suspected cancer-causing chemical.

Hardest hit would be the automobile and construction industries, the Society of the Plastics Industry Inc. said in a study released in advance of this week's Labor Department hearing into the problem.

The department's Occupational Safety and Health Administration has proposed new rules to limit the exposure of workers in vinyl chloride plants to no detectable level. The standards were proposed after cases of a rare liver cancer — 21 of them worldwide so far — began showing up among workers in such plants.

The industry said that it cannot meet a zero-level, and the result of such a rule would be to force it to shut down. While only about 6,500

workers are involved directly in plants which turn out vinyl chloride gas, or its solid form, polyvinyl chloride, many thousands more depend on the plastic products into which the material is turned.

"The effect on the nation's economy and on the social order in terms of the human hardship it would cause would be catastrophic. We expect that the final results (from the study) will show a potential loss in excess of 2 million jobs."

23217116

GREEN BAY, WIS.
NEWS
D. CIRC. N. AVAIL

JUN 25 1974 *Reprinted*

Vinyl Chloride Rules Could End Jobs

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide con-

troversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases worldwide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry, Inc., contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.6 million jobs at a cost to the

economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed

standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

The Detroit News
DETROIT, MICH.
D. 699,652 SUN. 843,531

JUN 26 1974

Plastics firms assail health rules

From Washington Post and AP Dispatches

WASHINGTON — The American plastics industry warned yesterday that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2.2 million jobs and \$90 billion in annual production.

Anton Vittone, president of R. F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could virtually shut down his industry.

Vittone appeared at a Labor Department public hearing with scores of other industry representatives to oppose implementation of new regulations which would limit factory air levels of vinyl chloride to less than one part per million — so small as to be undetectable.

23217117

The Ann Arbor News
ANN ARBOR, MICH.
D, 38,433 SUN, 37,233

JUN 26 1974

Chemical Ban Could Cut Jobs

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening Tuesday at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases world-wide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

A study of vinyl chloride workers at the Goodyear plant in Niagara Falls, N.Y., found that three of 24 deaths were due to the cancer, angiosarcoma.

Dr. Irving J. Selikoff, director of the Environmental Sciences Laboratory of the Mount Sinai School of Medicine, cited the study. He emphasized the critical importance of reducing the amount of vinyl chloride workers are exposed to, to a "no detectable level" as proposed by the Labor Department.

Selikoff was among dozens of witnesses Tuesday at a hearing on the Labor Department's proposed standards for regulating vinyl chloride use.

"The proposed permanent standard is not technologically feasible and, if adopted, would shut down the industry," warned Anton Vittone, president of the B. F. Goodrich Chemical Co.

Vittone, representing the plastic industry trade association,

proposed a different standard in prepare testimony. His proposal would reduce worker exposure to vinyl chloride from 50 parts per million of air now in force to 10 parts per million, effective October 1977.

But Selikoff argued that "the only prudent course for the prevention of angiosarcoma ... is to provide a work environment with no detectable levels of vinyl chloride."

Dr. Marcus M. Key, director of the National Institute for Occupational Safety and Health, said the finding of 19 cases of angiosarcoma — 13 of them in the United States — among vinyl chloride workers between January and May "indicates that we are observing a newly recognized occupational disease associated with exposure" to vinyl chloride.

He said that previously about 20 to 30 cases of the disease had been reported annually in the United States.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

23217118

CHICAGO
SUN-TIMES
U. 532,103 SUN. 703,103

JUN 26 1974

Industry hits cost of anticancer rules

By Tim O'Brien

Washington Post Special

WASHINGTON — The plastics industry warned Tuesday that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2.2 million jobs and \$99 billion in annual production.

Anton Vittone, president of the B.F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the rules could virtually shut down his industry.

Vittone appeared at a public hearing with scores of other industry representatives to oppose new regulations that would limit factory air levels of vinyl chloride to less than one part per million — so small as to be undetectable.

In recent months, vinyl chloride — a key chemical in the manufacture of many plastics

— has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been accumulating rapidly.

Dr. Marcus M. Key of the National Institute for Occupational Safety and Health testified that in the past two weeks, "We have identified two deaths from angiosarcoma of the liver in men employed at plants utilizing polyvinyl chloride to fabricate other products."

Key said seven cases have been reported at a B.F. Goodrich plant in Kentucky, three at a Goodyear plant in New York, two at a Union Carbide plant in West Virginia and one at a Firestone plant in Pennsylvania. Of the 13, only three victims remain alive, he said.

Based on laboratory experiments and the known cases of liver cancer in humans exposed to vinyl chloride, the Occupational Safety

and Health Administration concluded: "Our present judgment is that vinyl chloride is a carcinogenic agent."

In April, the agency issued an emergency standard limiting vinyl chloride air levels to 50 parts per million.

A key objection from the plastics and chemical industry is the feasibility of meeting the "no detectable level" standard that would result from the minimum vinyl chloride level of one part per million now proposed by the agency.

The plastics association also cited a study by the Arthur D. Little Co. of Cambridge, Mass.: "An immediate shutdown of all polyvinyl chloride resin plants in the United States and the subsequent unavailability of PVC resin could result in a loss of 1.7 million to 2.2 million jobs in consuming and related industries and a loss of domestic production value of \$65 billion to \$90

billion annually."

Vinyl chloride goes into the manufacture of such products as sporting goods, packages, phonograph records, electric insulation, floor tiles, clothing and paints.

While fewer than 7,000 U.S. workers are directly involved in making vinyl chloride and turning it into polyvinyl chloride, scientists suspect that hundreds of thousands of associated workers may be exposed to the danger.

Meanwhile, the AFL-CIO called the industry's economic warning a form of blackmail and charged that the chemical companies have ignored "overwhelming medical evidence" about the vinyl chloride danger.

23217119

SCOTTSBLUFF, NEBR.
STAR-HERALD
D. 15,500

JUN 26 1974 *B.K.*

2.2 Million Plastic Jobs Loss Disputed

WASHINGTON (AP) — Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

The AFL-CIO called the warning blackmail and accused the industry of "ignoring the overwhelming medical evidence" linking vinyl chloride to cancer among workers handling the chemical.

Vinyl chloride, a gas, is converted into polyvinyl chloride, a white powdery chemical resembling sugar, which is used in the manufacture of plastic products ranging from toys, food packaging, floor tiles, pipes, auto parts and phonograph records.

UNITED RUBBER WORKERS President Peter Bommarito said the AFL-CIO supports at the risk of losing jobs, proposed federal regulations that would reduce worker exposure to vinyl chloride in plants to "no detectable level."

He represented the AFL-CIO as chairman of its health and safety committee at the opening of Labor Department hearings on the planned regulations. Current standards limit worker exposure to vinyl chloride to 50 parts per million, a sharp reduction from the previous 500 parts per million.

"THIS COUNTRY survived for nearly 200 years without polyvinyl chloride and we can survive in the future without it," Bommarito declared. The industry had asserted that factories would be forced to close if the new regulations were adopted.

"This is not an easy position to take, but there is no alternative," Bommarito added. "We have both our jobs and our lives at risk."

Anton Vittone, chairman of the B.F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry Inc. testified that the "no detectable level" is impossible to achieve and, if adopted, would shut down the industry.

Vittone offered a proposal to reduce by October 1977, worker exposure to the chemical of 10 parts per million.

The industry submitted an independent study showing that an immediate shutdown of all polyvinyl chloride plants could result in the loss of between 1.7 and 2.2 million jobs in the plastics industry and other industries dependent on plastics products.

23217120

THOMASVILLE, N. C.
TIMES
D. 6,000

JUN 26 1974

Government, labor dispute plastic industry testimony

WASHINGTON (AP) — Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

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This was disputed by the Labor Department's Occupational Safety and Health Administration in an environmental impact statement.

The report said there was no evidence that adoption of

the proposed regulations would stop vinyl chloride production and use. It added, however, that the existence of some marginal firms might be threatened if they are forced to raise prices to pay for safety measures.

Vinyl chloride has been used by the plastic industry since World War II. The government imposed the temporary emergency standard after the discovery earlier this year that exposure to the chemical may be a cause of angiosarcoma, a rare form of liver cancer.

Dr. Irving J. Selikoff, who has been doing extensive research into the potential health hazard of vinyl chloride at the Mount Sinai School of Medicine in New York, testified that "the only prudent course" for preventing liver cancer among plastic industry workers is to reduce exposure to the no detectable level proposed by the government.

23217121

OGDEN, UTAH
STANDARD-EXAMINER
D. 41,500

JUN 25 1974 *By Hill*

Safety Rules Could Bring Job Cut in Plastics Field

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

CANCER CAUSE

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease.

Since then, 20 cases world-wide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

MANY TO TESTIFY

A total of 95 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced

to close immediately, resulting in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

CALLED UNREALISTIC

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

23217122

Plastic Ban Poses Job Loss Threat

WASHINGTON — The American plastics industry warned that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2.2 million jobs and \$90 billion in annual production.

Anton Vittone, president of B.F. Goddrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could virtually shut down his industry.

Vittone appeared at a public hearing with scores of other industry representatives to oppose implementation of new regulations, which would limit factory air levels of vinyl chloride to less than one part per million — so small as to be undetectable.

In recent months, vinyl chloride — a key chemical in the manufacture of many plastics — has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been rapidly accumulating.

Within the past two weeks, testified Dr. Marcus M. Key of the National Institute for Occupational Safety and Health, "We have identified two deaths from angiosarcoma of the liver in men employed at plants utilizing polyvinyl chloride to fabricate other products."

Key said seven cases have been reported at a B.F. Goddrich plant in Kentucky, three cases at a Goodyear plant in New York, two cases in a Union Carbide plant in West Virginia and one case in a Firestone plant in Pennsylvania. Of the thirteen reported cancer cases linked to vinyl chloride, only three

victims remain alive, he said.

In addition, experimental studies conducted by Industrial Bio-Test Laboratories of Northbrook, Ill., and by Prof. Cesare Maltoni of Bologna, Italy, have strengthened the belief that vinyl chloride causes cancer.

In a just-released telegram to John Stender, head of the Occupational Safety Health Administration in the Department of Labor, Maltoni reported that vinyl chloride produced "zymbal gland carcinomas, nephroblastomas, angiosarcomas of liver and other sites, skin narinomas and probably heptatomas and neuroblastomas" in rats.

In another experiment, Maltoni said, more than 60 mice were exposed to 50 parts - per - million of vinyl chloride for seven months.

After 49 weeks of dosage, he said, "we have observed nine mammary carcinomas, two liver fibro - angiomas, and two subcutaneous angiomas."

Based on the Maltoni and Bio-Test Laboratory experiments, plus the known cases of liver cancers in humans exposed to vinyl chloride, the Occupational Safety and Health Administration concluded that "our present judgment is that vinyl chloride is a carcinogenic agent."

In April, the agency issued an emergency standard limiting vinyl chloride air levels to 50 parts - per - million — the same daily dosage administered to Maltoni's mice. Now the agency proposes to reduce allowable vinyl chloride air levels to less than one part per million, the so-called "no detectable level" standard.

Washington Post Service

THE SPRINGFIELD UNION
SPRINGFIELD, MASS.

D. 83,064

JUN 26 1974

E. J. Miller

23217123

UTICA DAILY PRESS

UTICA, N. Y.

D. 28,782

JUN 26 1974

Bygones

Government, Industry Argue Vinyl Chloride Restrictions

WASHINGTON (AP) — Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride. The AFL-CIO called the warning blackmail and accused the industry of "ignoring the overwhelming medical evidence" linking vinyl chloride to cancer among workers handling the chemical.

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reduce by October, 1977, worker exposure to the chemical of 10 parts per million.

The industry submitted an independent study showing that an immediate shutdown of all polyvinyl chloride plants could result in the loss of between 1.7 and 2.2 million jobs in the plastics industry and other industries dependent on plastics products. This would result in lost production valued at between \$65 and \$90 billion a year, the study said.

This was disputed by the Labor Department's Occupational Safety and Health Administration in an environmental impact statement.

The report said there was no evidence that adoption of the proposed regulations would stop vinyl chloride production and use. It added, however, that the existence of some marginal firms might be threatened if they are forced to raise prices to pay for safety measures.

23217124

Vinyl Chloride Costs On Safety Seen High

By Richard E. Rotman
Washington Post Staff Writer

A vice president of Tenneco, Inc., a huge vinyl chloride manufacturer, predicted yesterday that it would take two to three years and at least \$10 million to reach safety levels five times that of proposed government standards. "This is no easy position to take," Bommarito said, "but there is no alternative. We have both our jobs and our lives at risk."

The Labor Department also disputed the industry's contention that new standards would stop vinyl chloride production and use. However, some marginal firms, the department admitted, might be threatened if forced to raise prices to pay for safety standards.

In New York, an AFL-CIO meat cutters union official revealed that cutting meat wrapping with hot wires releases fumes which cause dizziness, wheezing and a lack of breath. The official, Ralph Quatrocci, said, "Occupational illnesses which result in cancer and ultimately death is a price no worker should have to pay for his protection."

Taking a position identical to vinyl manufacturers and processors, Tenneco representatives called workers' deaths "tragic" but denied any had had the disease in their employ. Twenty workers connected with Tenneco's vinyl chloride processing have died in the last 17 years, although none, the company said, have had angiosarcoma.

One possible solution for reducing the effects of harmful levels of the chemical is the use of respirators and other artificial air sources. Before April 5, the government had allowed 500 parts of vinyl chloride per million of air until the suspicious deaths had changed standards to 50 parts per million. The "no detectable level" is 1 or 2 parts per million.

In some stages of the gas' formation into records, seat covers, electrical insulation and paint, workers reduce its presence to 25 to 50 parts per million with gas masks. But artificial air can only be used for short periods of time without causing harm to lungs and nostrils so something else must be devised, the industry and government have agreed.

Ventilation, outdoor manufacturing, and improved valves, flanges and hose connectors can reduce harmful levels. But engineering completely airtight connections is so difficult that the industry now loses 5 per cent of its product, Fath said.

The industry has predicted that if the 46 billion pound fabrication of vinyl chloride were shut down, 22 million jobs and as much as \$90 billion in production would be lost.

A labor leader has called the statistics "blackmail." In earlier testimony, United Rubber Workers President Pete Bommarito, supported the government's efforts despite the possible loss in jobs.

A 26

Friday, June 28, 1974

THE WASHINGTON POST

23217125

LONG BEACH, CALIF.
INDEPENDENT
D. 42,522

JUN 26 1974

2.2 million jobs said at stake

Plastics industry battle over restrictions on chemical

By ROBERT A. DOBKIN
AP Labor Writer

WASHINGTON — Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

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parts per million. "This country survived for nearly 200 years without polyvinyl chloride and we can survive in the future without it," Bommarito declared. The industry had asserted that factories would be forced to close if the new regulations were adopted.

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regulations would stop vinyl chloride production and use. It added, however, that the existence of some marginal firms might be threatened if they are forced to raise prices to pay for safety measures.

Vinyl chloride has been used by the plastic industry since World War II. The government imposed the temporary emergency

standard after the discovery earlier this year that exposure to the chemical may be a cause of angiosarcoma, a rare form of liver cancer.

Since January, 20 cases world-wide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

Dr. Irving J. Selikoff,

who has been doing extensive research into the potential health hazard of vinyl chloride at the Mount Sinai School of Medicine in New York, testified that "the only prudent course" for preventing liver cancer among plastic industry workers is to reduce exposure to the no-detectable level proposed by the government.

23217126

Further Vinyl Chloride Restrictions May Cost Over Two Million Jobs

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Vinyl chloride has been used by the plastic industry since World War II.

Since January, 20 cases world-wide of liver cancer have been linked to workers at plants where the vinyl chloride gas is used.

NEEDHAM, CONN.
BULLETIN
D. 31,500 S. 22,000

JUN 26 1974

23217127

WILLINGBORO, N. J.
BURLINGTON COUNTY
TIMES
D. 35,000

JUN 28 1974

Would regulation halt production?

PAGE ONE

WASHINGTON — An official of Tenneco Chemicals, Inc., said yesterday that proposed government regulations to slash worker exposure to vinyl chloride would force it to halt production of the chemical, which is used in the manufacture of plastics.

Tenneco Chemical operates a plant in Burlington Township where liquid vinyl chloride is processed into PVC resin. A plant spokesman has said workers there are protected by elaborate safety precautions, and that emissions from the plant were minimal.

Joseph Fath, a company vice president, said the alternative, if the planned standards were adopted, would be to require workers to wear respirators full time. This, he added, is "neither safe nor feasible."

"However, given the serious nature of available scientific and medical evidence regarding potential human health effects of vinyl chloride inhalation . . . the only conceivable course of action for industry is the maximum feasible reduction of human exposure to airborne concentrations of vinyl chloride monomer," he said.

Fath was one of dozens of witnesses testifying at a continuing Labor Department hearing on the controversial chemical which is suspected of causing angiosarcoma, a rare, fatal form of liver cancer found with increasing incidence in vinyl chloride plants.

The Labor Department has proposed regulations that would require chemical companies to eliminate leakage of vinyl chloride in the plants.

Tenneco, which annually manufactures 240 million pounds of polyvinyl chloride at plants in New Jersey and Texas, supported a proposal offered earlier this week by the plastics industry calling for reduction of vinyl chloride levels to 10 parts per million of air by October 1975.

Fath said it would cost Tenneco more than \$10 million to make the engineering changes required to meet the industry's standards.

"We hope that reason will prevail and that all interested parties including the federal government, labor, the medical community and the management of the polyvinyl chloride industry can com-

municate and cooperate toward the important goal of minimizing vinyl chloride exposure to the maximum extent feasible, without causing the severe economic consequences that could attend application of unrealistic and impossible standards" proposed by the government, Fath said.

The Society of the Plastics Industry warned Tuesday that imposition of the government standards would force plants to shut down and result in the loss of as many as 2.2 million jobs.

23217128

HOME FURNISHINGS DAILY
NEW YORK, N. Y.
D. 39,000

JUN 27 1974

By Hill

Plastics Industry Hits VC Code, Offers Own 'Workable' Proposal

By RICHARD WIGHTMAN
WASHINGTON (FNS) — The giant plastics-chemicals complex Wednesday staged a daylong effort to convince the Federal Government its proposed vinyl chloride health standards would be an unmitigated disaster to the economy.

Instead of taking a merely negative stance, the industry proffered an alternative "workable" standard which might lead to a satisfactory compromise — one which would protect workers from the chemical's alleged cancer-inducing properties.

The industry proposal, outlined at hearings held by the Occupational Safety and Health Administration, is a far cry from the "no detectable level" of VC atmospheric incidence proposed by OSHA for exposed workers.

THE PLAN, presented by the Society of the Plastics Industry, and explained by Anton Vittone, president, B.F. Goodrich Chemical Co., would phase down the air content of vinyl chloride to minimum levels starting Oct. 5, 1977.

By that date, a ceiling of 10 parts per million would be set for plants making vinyl chloride monomer and 25 parts per million for those producing polyvinyl chloride resins. (The present emergency standard sets the level at 50 parts per million.)

Vittone insisted that this effort, in itself, would tax the industry's

technical resources to the maximum and involve heavy costs and reduced capacity.

"Many companies will probably require variances of time or methods, therefore provisions for such variances should be made in the permanent standard," Vittone stressed.

HE ALSO EMPHASIZED that much of the needed technology to accomplish the phasedown still has to be developed.

"The commitment cannot be accomplished overnight," he told OSHA.

The SPI proposal, in any case, may provide a pragmatic base on which a permanent standard may be developed. OSHA is anxious this permanent standard may be developed. OSHA is anxious this permanent version should be in place by Oct. 5, since that is the

date when the emergency standard expires and, under OSHA's statute, its life cannot be extended.

SPI produced ammunition from Arthur Little, Inc., the international consulting firm, that any shutdown of PVC production would have serious repercussions on many user industries.

In an accompanying presentation, the company singled out apparel and household furnishings, motor vehicles, construction, specialty and miscellaneous products as the main PVC users.

It noted that elimination of PVC from the market would have the most serious impact on autos and construction but added that bottlenecks would show up in supplies of flooring, upholstery and insulated wire and cable.

"AN IMMEDIATE SHUTDOWN of all PVC resin plants in the U.S. would generate an economic hardship of large magnitude that would create severe economic dislocations in many local areas," Arthur Little predicted.

It also noted that some PVC-using products would need a long lead time in order to switch to substitute materials and described auto upholstery and "related soft trim" items as particularly prone to this problem.

The firm claimed that an immediate shutdown of all PVC resin plants could result in a loss of up to 2.2 million jobs and up to \$90 billion in lost production annually.

23217129

LAWTON, OKLA.
PRESS
D. 11,000

JUN 26 1974

Vinyl Job Loss Claim Is Disputed

WASHINGTON (AP) — Government and labor witnesses disputed claims by the plastic industry Tuesday that as many as 2.2 million jobs would be eliminated by further restrictions on vinyl chloride.

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23217130

OSHA Vinyl Chloride Proposal Hit

By DAN SKARTEVEID
Journal of Commerce Staff
WASHINGTON — Proposed government limits on worker exposure to vinyl chloride are not technologically feasible and could cause the loss of more than two million jobs, plastics industry spokesmen warned yesterday as several days of Labor Department hearings on the standards began.

The Occupational Safety and Health Administration (OSHA) has proposed that allowable employee exposure to vinyl chloride be reduced to "no detectable level." An emergency temporary standard is now in effect limiting it to 50 parts per million parts of air to which workers are exposed.

This standard, issued in April, represented a considerable reduction from the 500 ppm guideline which had been in effect previously. OSHA came out with it following reports of several workers exposed to vinyl chloride having died from liver cancer.

The even tougher "no detectable level" standard was proposed in May soon after laboratory studies with mice indicated that the 50 PPM concentration had resulted in some of the rodents developing liver cancer.

Vinyl chloride is widely used in the manufacture of

ing being applied in three years. A maximum time-weighted average of 10 PPM would apply initially and be lowered to 5 PPM in 1977.

As the hearings opened yesterday, OSHA official Daniel P. Boyd emphasized that all of the testimony being heard this week will be taken into consideration before a final standard is issued, and that the controversial proposed standard is, as of now, "just that — a proposal."

The theme of massive job losses, should the "no detectable level" guideline go into effect, was also raised yesterday by Earle F. Webster, a representative of the Polyvinyl Chloride Belting Manufacturers Committee. He said the proposed standard would bring about "a serious economic disaster" in his industry and others dependent on it.

Mr. Webster urged a lowering of the standard. As he put it, "we believe there must be some level of vinyl chloride in the occupational atmosphere that will not cause adverse results on people."

Other Testimony

Other testimony yesterday included accounts of experiments on laboratory mice who were exposed to vinyl chloride both in this country

A telegram was professor Cesare reported that out Bologna exposed seven months, then detected in 13

5 individuals or have asked to have hearings, which are run at least once a day. Yesterday's hearing was expected to spill into the eve-

in a related de-
Capitol Hill, a
for the U. S.
commerce told a
committee hearing
would be required
"cost impact"
each new safe-
standard it pro-
poses of complying
with the cost of
s," Richard B.
ified, in urging
position of new
costs without a re-
t justifying that
avoided whenever

the U.S. chamber of labor law, a change was made to put greater voluntary compliance and incentive on punitive

and in Italy read from Maltoni, who of 60 mice to 50 PPM cancer had instances. A total of organizations testify at these are slated through Saturday opening sessions to extend

Meanwhile, velopment spokesman Chamber o House sub that OSHA to submit statement v ty or health poses. "The with OSHA doing busi Berman te that "the compliance costant ben cost" be possible.

Mr. Berner's director said a balance needed in reliance on industry rating action.

Debating Health vs. Jobs

Plastics Industry Mobilizes to Thwart Tough Rules on Handling Vinyl Chloride

By WALTER MOSSBERG

Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON — As the federal government moves closer to adopting stringent controls over handling of the ubiquitous industrial chemical vinyl chloride, manufacturers who use it are mobilizing to try to show that the controls would prove economically disastrous.

The rules would be utterly unworkable, the companies say, and industry would lose an essential manufacturing material. In consequence, they add, makers of plastic pipe, auto parts, phonograph records and many more products would be driven to the wall. And, they contend, thousands of jobs would vanish.

This gloomy picture is likely to dominate Labor Department hearings, beginning today, on planned standards for eliminating the exposure of plastics-industry workers to the chemical, which is suspected of causing cancer.

Exposure to vinyl chloride, a gas, has been linked by researchers to 19 cases of a rare liver cancer, angiosarcoma, among workers handling it in the U.S. and other countries; in 16 of these cases, death resulted. In addition, angiosarcoma has recently been blamed for the death of two employees in U.S. plants handling polyvinyl chloride, the powdered derivative of vinyl chloride that is fabricated into a wide range of plastic products. (Two other deaths from angiosarcoma have been discovered among people living in the vicinity of plants using polyvinyl chloride.)

In April, the Labor Department's occupational safety and health administration imposed a temporary emergency standard limiting workers' exposure to vinyl-chloride gas to 50 parts per million in the air they breathe, a sharp reduction from the previous limit of 500 parts. Now, the agency is proposing—and witnesses at this week's hearings will debate—a standard cutting exposure permanently to "no detectable" level at all.

Although the plastics industry opposed the emergency ruling, its voice has so far been weaker than that of organized labor and various scientific groups, which back the tough rules.

Doom for the Industry?

At this week's hearings, however, the industry is expected to argue strongly that the "no-detectable" exposure plan would spell doom for the several dozen plants that make vinyl chloride gas or turn it into polyvinyl chloride powder or resin, and for most of the hundreds of plants that turn polyvinyl chloride into plastic products.

The standard would require that most operations in the production of vinyl chloride and polyvinyl chloride, which employ an estimated 6,500 workers, be conducted in closed-off, regulated areas where exposure can be controlled by ventilation devices or other methods. In addition, some operations of plants turning polyvinyl chloride into products, which are said to employ up to 700,000 workers, would be subjected to similar stringent engineering rules if those operations could cause the polyvinyl chloride powder or resin to release trapped quantities of raw vinyl chloride gas.

Last week the Society of the Plastics Industry, a trade group, asserted that sufficient technology doesn't exist to meet the proposed standard and warned that much of the vinyl and polyvinyl chloride industry might have to close if the standard goes into effect. The society predicted that 1.6 million jobs and "at least \$5 billion" in sales and production could be lost.

Ralph Harding Jr., president of the society, said that the proposed standard "is technologically infeasible to achieve, even

with the highly sophisticated methods of in-plant control that have been developed by the industry over the years. If the proposed 'no-detectable-level' standard is adopted, the vinyl chloride and polyvinyl chloride resin producing industries will be forced to close down immediately."

A number of labor-union and occupational-health experts are expected to dispute the society's claim at the hearings. They contend that it is possible to meet the standard without closing the industry.

But harsh predictions are contained in many of the more than 125 letters from plastics firms already on file with the Labor Department. The letters, representing the writers' formal "comments" on the planned rules, give an indication of the probable tone of this week's hearings. Although most letters concede that some controls are needed on vinyl chloride, most contend that the proposed measures would mean nothing less than the collapse of their industry.

Almost all the letters come from users of polyvinyl chloride, or PVC, and not companies directly handling vinyl chloride itself or those turning it into PVC. In most cases, they explain that their suppliers of PVC have told them the standards will make it impossible for them to continue producing the raw plastic. Urged to write to the government, the PVC users have done so, forecasting their financial ruin.

Dire Predictions

"Unless a reasonable approach is taken," wrote Frank Groeneveld Jr., president of a plastic-pipe-extruding firm in Florida, "it could mean the destruction of many small businesses such as ours where we have invested our life savings."

R. J. Clayton, chairman of Louver Drape Inc., a California maker of PVC window blinds and folding doors, wrote that "37 years ago, at the depth of the depression, I started a one-man business which has grown today where we do approximately \$7 million worth of business and employ over 250 people." If the new rules are imposed, he said, "we'd be back to a one-man business overnight."

One firm, Custom Trim Products Inc., which makes plastic trim for several big auto makers, warned that the new rules could cut off its supply of PVC resins, ending its production and causing it to risk lawsuits by Detroit for failure to fulfill supply contracts. The firm, an officer wrote, "would undoubtedly be forced into bankruptcy."

Hubbard Apiaries, a beekeeping company in Onsted, Mich., wrote to declare that it couldn't remain in business if PVC supplies were threatened because its honey is sold in PVC bottles and glass bottles are scarce as a result of a soda-ash shortage.

In fact, many of the letters contended that PVC is already in short supply, highly versatile and absolutely necessary for a variety of important uses.

Spokesmen for the record industry insisted that the plastic is vital to its operations. MCA Records Inc. contended that if

the standards forced PVC production to end, "our industry would be forced out of business."

The National Association of Home Builders said the standards could drive the rising costs of housing even higher by forcing builders to abandon economical PVC housing components. It warned that such a development could mean "sorely needed housing would be beyond the reach of an increasingly large segment of the public."

Norton Co.'s plastics and synthetics division, which makes tubing for medical uses, warned that if the new rules curbed supplies of PVC, desperately needed equipment used in kidney dialysis and heart surgery might become unavailable. And Graniteville Co. of Graniteville, S.C., a maker of fire-retardant tents and tent material, called PVC "the most important component" in its products.

What's more, Arthur Culbertson, a Florida plastics executive, and Gerald Kessler, an officer of an Ohio plastics company, urged modification of the proposed standards on the grounds that they themselves had had long personal exposure to vinyl chloride without ill effects.

Most of the letter writers acknowledged the need to protect workers from the possibility of liver cancer. But they urged delay in imposing such harsh restrictions, both to give scientists time for further research and to allow the businesses to phase in the new controls.

But one writer took a decidedly less sympathetic view of the dangers of death from vinyl chloride. Jameson Crane, of Crane Plastics Inc. in Columbus, Ohio, wrote, "We continue to be impressed with the comparison of the number of deaths annually due to suicide prompted by loss of jobs, versus the 19 angiosarcoma deaths world-wide over 35 years of PVC production."

WALL STREET JOURNAL
NEW YORK, N. Y.
D. 518,065

JUN 25 1974

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EVERETT, WASH.
HERALD
D. 41,000

JUN 24 1974

Safety at Everett plastics plant assured

By JOHN WOLCOTT
Business Editor

The Kokoku USA plastic products plant being built east of the Boeing 747 plant will in no way be involved with the production of vinyl chloride, a chemical recently suspected of contributing to a rare type of liver cancer.

In a statement released to the Herald this morning, the plant's general manager and vice president, Kouchi Hirotsuka, said the Everett facility only uses polyvinyl chloride resins for its own products but does not manufacture the resins themselves or the chloride chemical used in making the resins.

"We would like to clarify (our position) . . . we are not those manufacturers who make vinyl chloride or . . . polyvinyl chloride resins using vinyl chloride as the raw material. We fabricate polyvinyl chloride resins, which are the final products of the above processes, into vinyl films and sheetings," Hirotsuka said.

"In other words, we are not among the group of manufacturers whose process generates the vinyl chloride gas. It is said that such polyvinyl chloride resins powders as are in the market can be used without

any such danger (to workers).

"It is reported that in our process of making films and sheetings using the resins, no such vinyl chloride gas generation has been detected even with the most sensitive detectors obtainable," he said.

"Our parent company has been producing vinyl films and sheetings for a little more than 25 years in Japan. There have been no incidents at all of any employees suffering from vinyl chloride gas," Hirotsuka said.

A local company official also noted that "there are 40 to 50 of the workers at

the parent firm in Tokyo who have worked at the plant for the entire 26 years and none of them have had cancer in any form."

Hirotsuka notes that the Occupational Safety and Health Administration (OSHA) previously used an exposure limit of 500 parts per million for workers in plants producing the resins that Kokoku uses for its products.

Last May, when an apparent link between high levels of exposure of workers to the gas generated in the resin manufacturing process and higher than normal incidence of a rare

type of liver cancer, OSHA ordered exposure limits set at 30 parts per million.

Public hearings begin tomorrow in Washington, D.C., that could lower the exposure limit to one part per million or to "no detectable level."

Construction is progressing rapidly south of Everett on the first phase of Kokoku's plastic products plant, which will produce polyvinyl chloride film and leather, polyurethane foam rubber and plastic sheeting for wrapping and protective covers.

Kokoku USA Inc. is owned by Kokoku Chemical Industry Co. Ltd., of

Tokyo and is the firm's first U.S. production plant. When it is completed this year it will employ 40 to 50 people, primarily factory workers and professional engineers.

The plant is being built on about one-third of the firm's 40-acre site, fronting on 80th St. SW and east of the Boeing 747 plant.

In New Jersey, Achilles KCI Corp. has been distributing all of the Tokyo firm's products for the past decade and will also receive products from the new Everett plant.

In a related statement on the issue of health dangers from the production of vinyl chloride and resins

used by many companies like Kokoku, the Society of the Plastics Industry last Friday released survey results that showed 1.6 million jobs would be lost and \$65 billion in lost sales and production would result from a shut-down of vinyl chloride plants by OSHA regulations.

Vinyl chloride is used primarily to produce resins, which are in turn made into such products as flooring, pipe, curtains, phonograph records, telephones, equipment, insulated wire, luggage, sporting goods and automobile parts.

The Society charged that the "no detectable level" standard being proposed by OSHA is "technologically infeasible" and would close down the entire industry and much of the nation's economy if it is approved.

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HEATED
D. 41,000

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Vinyl chloride protections not for closing industries

HUNTINGTON, W. VA.
ADVERTISER
D. 17,000

JUL 12 1974

By Hill

WASHINGTON (AP) — New federal regulations to protect workers against exposure to vinyl chloride will not be so tough as to put the chemical and plastic industries out of business, says a Labor Department official.

"That is not the intention of the Labor Department," said the official, Daniel P. Boyd.

Vinyl chloride, which is used in the manufacture of a wide range of everyday plastic products, has been linked to a rare form of liver cancer among workers exposed to it. There is still some dispute whether the chemical is the cause or how great the danger may be.

Boyd said that if the health standpoint was the sole consid-

eration he would order the chemical banned. But he added that technological and economic considerations must be weighed as well as "political inputs."

Court decisions have indicated it is proper for the Labor Department to consider the economic impact in setting industrial health and safety standards.

"There is no likelihood in my mind that we're going to put industry out of business," Boyd told newsmen Thursday after nine days of hearings on proposed permanent restrictions on vinyl chloride.

Boyd, director of standards development for the department's Occupational Safety and Health Administration, said he expected the new rules to be issued by Oct. 5.

In promulgating the new rules, Boyd's staff will study more than 35 hours of direct testimony from more than 40 witnesses.

Witnesses from the plastic and chemical industries warned during the hearings that the proposed government regulations for reducing workers' exposure to less than 1 part vinyl chloride per million parts of air, or "no detectable level," were either impossible or too expensive to meet. They said plants would be forced to close.

Spokesmen for labor unions disputed these claims and denounced as blackmail the industry's assertion that as many as 2.2 million jobs could be lost if the government's proposal was adopted.

"The plastics industry knows that they have an occupational health problem," said Anthony Mazzocchi, an official of the Oil, Chemical and Atomic Workers Union. "The only question in their minds is how long can they put off dealing with the problem and how can the total expenditure of funds be minimized."

The Society of the Plastics Industry proposed that exposure levels be reduced from the present 50 parts per million to 25 parts per million by October 1975, a level industry officials said that could be met by most companies.

Claims Conflict On Vinyl Chloride

WASHINGTON (AP) — A medical study has produced new evidence suggesting a high incidence of death from a rare liver cancer among factory employees working with vinyl chloride, a chemical widely used in the plastics industry.

A study of vinyl chloride workers at the Goodyear plant in Niagara Falls, N.Y., found that three of 24 deaths were due to the cancer angiosarcoma.

Dr. Irving J. Selikoff, director of the Environmental Sciences Laboratory of the Mount Sinai School of Medicine, cited the study. He emphasized the critical importance of reducing the amount of vinyl chloride workers are exposed to, to a "no detectable level" as proposed by the Labor Department.

feasible and, if adopted, would shut down the industry," warned Anton Vittone, president of the B. F. Goodrich Chemical Co.

PROPOSAL

Vittone, representing the trade association, proposed in prepared testimony a different standard—reducing worker exposure to vinyl chloride from 50 parts per million of air now in force to 10 parts per million, effective October 1977.

But Selikoff argued that "the only prudent course for the prevention of angiosarcoma ... is to provide a work environment with no detectable levels of vinyl chloride."

Dr. Marcus M. Key, director of the National Institute for Occupational Safety and Health, said the finding of 19 cases of angiosarcoma—13 in the United States—among vinyl chloride workers between January and May "indicates that we are observing a newly recognized occupational disease associated with exposure" to vinyl chloride.

United Rubber Workers President Peter Bommarito, representing the AFL-CIO, said organized labor supported the stringent controls proposed by the government even at the risk of losing jobs.

WITNESSES

Selikoff was among dozens of witnesses Tuesday at a hearing on the Labor Department's proposed standards for regulating its use.

Representatives of the Society of the Plastics Industry, a trade association, argued that the medical evidence was too inconclusive to require banning worker exposure to the chemical.

"The proposed permanent standard is not technologically

HILLO, HAWAII
TRIBUNE-HERALD
D. 11,154 SUN. 11,437

JUN 27 1974

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JUN 25 1974

PURCHASING
NEW YORK, N. Y.
E. O. WEEK 37,000

JUL 9 1974

UNEMPLOYMENT for at least 1.6 million workers is predicted by the Society of the Plastics Industry, if proposed OSHA standard regarding worker

exposure to vinyl chloride is adopted. OSHA wants "no detectable level" of the material--suspected of causing liver cancer--in industrial plants. SPI claims this is impossible and would force a shut-down of the industry.

HOME FURNISHINGS DAILY
NEW YORK, N. Y.
D. 39,000

JUN 24 1974

Vinyl Chloride Guide Plan Decried by Plastics Society

WASHINGTON (FNS) — The Society of the Plastics Industry has charged the Labor Department with threatening the loss of 1.6 million jobs with the new guidelines on vinyl chloride.

The society said, in rebuttal to new Federal inspection guidelines for plants using the chemical, that over a million and a half employees would be thrown out of work and \$65 billion lost in sales and production.

THE PROPOSED NEW

STANDARD would cut the air content of vinyl chloride in plants to "no detectable level."

"It is infeasible to achieve, even with the highly sophisticated methods of in-plant control that have been developed by the industry," SPI insisted.

The new standard will be the subject of hearings starting Tuesday.

Many other user industries are expected to echo SPI's warnings that "The vinyl chloride and polyvinyl chloride resin-producing industries will be forced to close down immediately" if the standard is adopted. Nearly 80 organizations already have said they will testify.

Vinyl folks say ban could cost 1.6 million jobs

By ROBERT A. DOBKIN

WASHINGTON (AP) — The plastics industry warns that proposed government rules to drastically reduce workers' exposure to a cancer-causing chemical could mean the loss of 1.6 million jobs.

This was one of the points to be made by the industry during a week-long public hearing opening today at the Labor Department.

The department's Occupational Safety and Health Administration has proposed permanent restrictions that would limit air levels of vinyl chloride in plants to less than one part per million, or too small to be detected. The current emergency standard is 50 parts per million.

Vinyl chloride, the foundation for much of the modern plastics industry, is the center of a growing worldwide controversy over its potential health hazard to workers and possibly consumers.

DANGER TO LIVER

The government imposed the temporary emergency standard after the discovery earlier this year that exposure to vinyl chloride may be a cause of a rare form of liver cancer known as angiosarcoma.

The B. F. Goodrich Co. disclosed in January that four workers at its vinyl chloride conversion plant in Louisville, Ky., died from the disease. Since then, 20 cases worldwide have been linked to workers at plants where the vinyl chloride gas is produced or converted into polyvinyl chloride.

About 6,500 U.S. workers are involved in making vinyl chloride and turning it into polyvinyl chloride, a solid plastic used in countless products including paints, pipes, floor

tiles, toys, food packaging, phonograph records and clothing.

At first it was thought the danger involved only the workers at the first stage of the manufacturing process but scientists have now turned up evidence indicating that as many as 700,000 workers could be exposed to the danger.

A total of 85 witnesses, representing government, the medical community and the big plastics and chemical manufacturers, have asked to testify at the hearings.

The Society of the Plastics Industry Inc. contends that if the government's proposed "no detectable level" is adopted, scores of plants will be forced to close immediately, resulting in the loss of 1.6 million jobs at a cost to the economy of \$65 billion.

Labor Secretary Peter J. Brennan, in a statement issued before the hearing, did not comment on the industry's claim of lost jobs.

"The purpose of this hearing this week is to elicit additional information from those in the industry — employers and employees — and others concerning the hazards from exposure to vinyl chloride, the best means of protection and the impact of the proposed standard," Brennan said.

The industry argues that while it favors reducing workers' exposure "to as low a level as possible," the proposed standard is impossible to achieve with today's engineering technology.

Industry sources indicated that the industry will propose an exposure level below the current temporary level of 50 parts per million, but somewhat above the government's proposed zero level.

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JUL 1 1974 *By Keller**Ahead for vinyl chloride...*

High-stakes decisions on job safety

By Kenneth A. Kovaly

HOW do you weigh the loss of 1.6 million jobs against 19 deaths? That's an unanswerable question. Yet that's the nub of the issue facing the Labor Dept. in its efforts to protect workers from the potential dangers of vinyl chloride.

Certain to be affected by the decision are workers involved in converting vinyl chloride monomer into its main product: polyvinyl chloride (PVC).

Last week, vinyl chloride makers and users urged the Dept. of Labor at a Washington hearing to avoid imposing strict controls on the industry before all the facts were in. Some scientists, however, urged that strict controls be imposed now, stating that enough facts were in to make such a decision.

The Occupational Safety & Health Administration (OSHA) proposed on May 10 that vinyl chloride levels in a plant's atmosphere be set at "no detectable" limit, effectively one part per million (ppm) with the instruments that would be used.

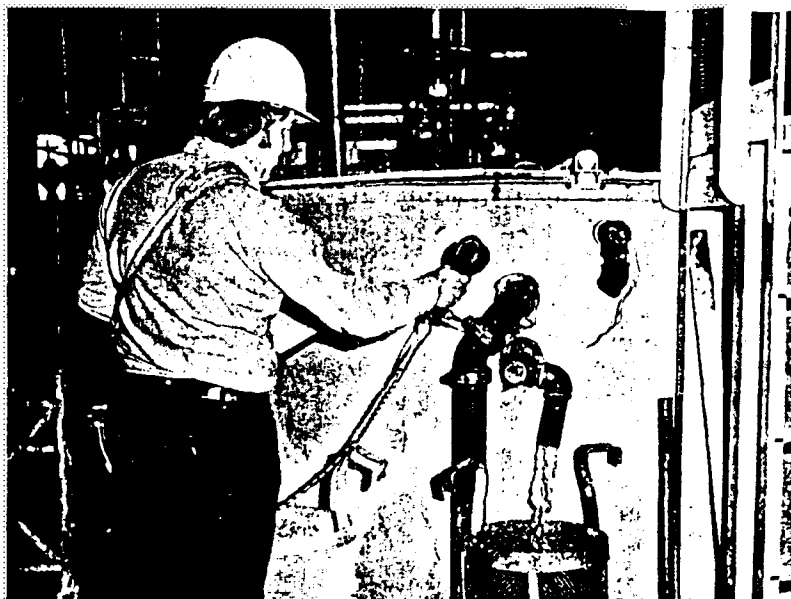
Right now the PVC makers are living with a 50 ppm exposure limit imposed after several cases of liver cancer were discovered early this year in workers at plants making PVC.

The Society of the Plastics Industry (SPI), New York, along with individual producers of PVC, claims the new limit can't be met with today's technology.

SPI is proposing a maximum exposure level of 40 ppm and a maximum daily time-weighted average level of 25 ppm, to be effective Oct. 5, in PVC plants.

Exposure levels would drop in stages over two years to a 25 ppm ceiling and a 10 ppm average.

Plants making vinyl chloride



A safety inspector uses a portable organic vapor analyzer to check a polymerization vat at B. F. Goodrich Chemical Co.'s PVC plant in Louisville.

itself would face a ceiling of 25 ppm and an average of 10 ppm this October, and have three years to lower these to 10 and 5 ppm respectively.

The industry claims a no detectable limit would put it out of business, a claim which a Labor Dept. environmental impact study of the proposed limit, released at last week's hearings, contradicts.

Massive impact—SPI has commissioned Arthur D. Little Inc. (ADL), Cambridge, Mass., to study the impact of that limit.

Early results from that study show that at least 1.6 million workers would lose their jobs if the no detectable limit were imposed. In addition, the cost in lost sales and production would amount to at least \$65 billion, the study says.

The study used an input/out-

put economic model to analyze the effects. It found that the automotive industry would feel the greatest impact if PVC became unavailable. Right now, PVC goes into insulated wire and cable, component parts, upholstery, and other products used in autos. At least 600,000 jobs would be lost in the automotive industry and the sales loss would come to \$35 billion. The construction industry would also be hard hit, with a loss of at least 500,000 jobs and \$14 billion in sales.

The final results of the ADL study are expected to show that more than 2 million jobs will be lost if the industry is forced to shut down. And Ralph L. Harding Jr., president of SPI, makes it clear that if the no detectable level is adopted, "the vinyl chloride and polyvinyl chloride resin producing industries will

Hearings show need for more data on PVC

By Bob Benchley,
Associate Editor

WASHINGTON — The murmuring of hundreds of simultaneous conversations, audible as soon as you enter the building, grows louder as you step into the cathedral-like auditorium. The sound bounces off the domed ceiling and the rows of columns that line either side of the room, and you are enveloped in a confusion of suits and clicking briefcases. Technicians make last-minute lighting adjustments while TV camera crews and soundmen set up their equipment. Reporters scurry about, notepads and tape recorders in hand, trying to get comments before the proceedings begin. Everywhere papers are being shuffled.

Then, all eyes turn to the front of the room as the bright young men of the regulatory agencies file onto the stage. Judge Gordon J. Myatt, who at first glance seems to be the only black man among the 1,200 present, gavels the

murmuring into silence, and those in the audience settle into their seats for the long wait. The Department of Labor's hearings on vinyl chloride production and worker safety—certain to have a major effect on the plastics in-

dustry regardless of the outcome—have begun.

That was the atmosphere in Labor's Departmental Auditorium here on June 25 as the opening testimonies were presented. The subject

of debate was the permanent worker exposure standard of "no detectable level" proposed by the Department's Occupational Safety and Health Administration (OSHA) May 10 (FDP: 6-6-74; p. 1). Inhalation of fumes created during production of PVC has been linked with angiosarcoma of the liver, a rare, fatal cancer. Other related effects are being investigated. In addition, three deaths have now been reported among workers in plants where PVC resin is fabricated into many household and industrial products. Fabricators are covered under some sections of the proposed standard.

PVC producers have already been subject to an enforced emergency exposure standard of 50 parts per million in air, but recent tests at even this level have produced liver cancers and other disorders in rats. OSHA's strict proposal for a permanent standard is based on the fact that no exposure level has been proven safe and that the emergency standard expires October 5.

The plastics industry, calling the standard technologically impossible and economically unfeasible, has predicted dire results ranging from tremendous hikes in the price of PVC resin to a complete shutdown of producers due to compliance difficulties. The Society of the Plastics Industry (SPI) has also released preliminary results of a study that it says predicts disastrous effects to the U.S. economy if the producers are forced to shut down.

FOOD AND DRUG
PACKAGING
NEW YORK, N. Y.
W. 35,000

JUL 18 1974

23217137

With the emotional issue of cancer in the air, the government, industry and labor representatives showed up in force, each with teams of medical and technical experts to back up their contentions. Rather than degenerating into a shouting match, however, the proceedings were generally characterized by determination on all sides. Those presenting testimony were thoroughly prepared, ready to take their best shot, with the knowledge that it might be their only chance. Although only two days of hearings were completed by press time, the principal spokesmen for all three factions had been heard from, with subsequent testimony expected to consist of supportive statements or to deal with areas of special interest.

Daniel P. Boyd, OSHA's director of the Office of Standards Development, led off by cautioning that the proposed standard is "just that—a proposal. It represents our best judgment based on the information available to us on May 10." He added, however, that "our present judgment is that vinyl chloride is a carcinogenic agent," and that the hearings were convened to determine what the permanent standard should be—not whether there was any question of danger from exposure to high levels of the substance.

The government's admitted difficulty in devising a permanent standard was backed up by Dr. Marcus M. Key, director of the National Institute for Occupational Safety and Health (NIOSH). NIOSH is an arm of the Center for Disease Control in

the Department of Health, Education and Welfare and the agency that received the reports of the initial cancer deaths in B. F. Goodrich Chemical Co.'s Louisville plant. Dr. Key described his Institute's "inability to describe a 'safe' exposure level, hence our recommendation was that where any employee is exposed to measurable concentrations of VC . . . he shall be afforded respiratory protection."

PVC is widely used in packaging, and Dr. Key outlined NIOSH's preliminary investigations into extrusion, thermoforming, calendering and plastisol processing operations at seven fabrication plants. He reported that peak levels of at least 300 parts per million were measured in these plants, although "extended exposure to such concentrations is improbable. In view of the finding of appreciable concentrations," he concluded, ". . . we recommend that exposure to this carcinogen be controlled whenever it is encountered in the workplace."

Dr. Irving J. Selikoff, Professor of Medicine at Mount Sinai School of Medicine and a noted occupational health expert, also expressed concern over possible dangers to workers at all stages of vinyl chloride production and usage. These hazards, he said, may be posed not only to workers in resin plants, but also to "conceivably many hundreds of thousands of polyvinyl chloride production workers, fashioning this useful plastic into thousands of products—and possibly ex-

23217138

JUL 24 1974

Vinyl Chloride Limits Criticized

By TIMO'BRIEN
Washington Post

WASHINGTON — The American plastics industry has warned that proposed government rules to slash vinyl chloride levels in factories to minimize the danger of cancer could cost the nation up to 2.2 million jobs and \$90 billion in annual production.

Anton Vittone, president of B.F. Goodrich Chemical Co. and an official of the Society of the Plastics Industry, said the proposed health rules could virtually shut down his industry.

Vittone appeared at a public hearing with scores of other industry representatives to oppose implementation of new regulations, which would limit factory air levels of vinyl chloride to less than one part per million — so small as to be undetectable.

Meanwhile spokesmen for two Painesville Twp. plants involved in the production of plastics have also warned that enforcements of "zero" standards would put them out of business.

The two plants are Unifroyal Inc., 720 Fairport-Nursery Rd., and Robinitch Inc., 786 Hardy Rd.

Both plants have been involved in government studies to determine whether any of their employes may be in danger from exposure to vinyl and polyvinyl at the plants.

So far no workers have shown any signs of the disease and both plants have initiated more stringent safety regulations to protect workers.

In recent months, vinyl chloride — a key chemical in the manufacture of many plastics — has been linked to a rare form of cancer called angiosarcoma of the liver. The evidence has been rapidly accumulating.

Within the past two weeks, testified Dr. Marcus M. Key of the National Institute for Occupational Safety and Health, "we have identified two deaths from angiosarcoma of the liver in men employed at plants utilizing polyvinyl chloride to fabricate other products."

Key said seven cases have been reported at a B.F. Goodrich plant in Kentucky, three cases at a Goodyear plant in New York, two cases in a Union Carbide plant in West Virginia and one case in a Firestone plant in Pennsylvania. Of the thirteen reported cancer cases linked to vinyl chloride, only three victims remain alive, he said.

In addition, experimental studies conducted by Industrial Bio-Test Laboratories of Northbrook, Ill., and by Prof. Cesare Maltoni of Bologna, Italy, have strengthened the belief that vinyl chloride causes cancer.

In a just released telegram to John Stender, head of the Occupational Safety Health Administration in the Department of Labor, Maltoni reported that vinyl chloride produced "zymbal gland carcinomas, nephroblastomas, angiosarcomas of liver and other sites, skin carcinomas and probably hepatomas and neuroblastomas" in rats.

In another experiment, Maltoni said, more than 60 mice were exposed to 50 parts-per-million of vinyl chloride for seven months. After 42 weeks of dosage, he said, "we have observed nine mammary carcinomas, two liver fibro-angiomas, and two subcutaneous angiomas."

Based on the Maltoni and Bio-Test Laboratory experiments, plus the known cases of liver cancers in humans exposed to vinyl chloride, the Occupational Safety and Health Administration concluded that "our present judgment is that vinyl chloride is a carcinogenic agent."

In April, the agency issued an emergency standard limiting vinyl chloride air levels to 50 parts-per-million — the same daily

dosage administered to Maltoni's mice. Now the agency proposes to reduce allowable vinyl chloride air levels to less than one part per million, the so-called "no detectable level" standard.

A key objection from the plastics and chemical industry is the feasibility of meeting the "no detectable level" standard.

"Such a commitment cannot be accomplished overnight since, in certain areas, the technology for accomplishing it is, as yet, not developed, and when developed, facilities must be installed requiring time for engineering, procurement and installation," Vittone said.

Ralph L. Harding, Jr., president of the plastics association, said the companies "are sincerely concerned with providing all appropriate and necessary safeguards."

They have already achieved substantial improvement in their operations...Nobody has to remind them of their responsibilities to their fellow workers."

The plastics association cited a study by the Arthur D. Little company of Cambridge, Mass.: "An immediate shutdown of all polyvinyl chloride resin plants in the United States and the subsequent unavailability of PVC resin could result in a loss of 1.7 to 2.2 million jobs in consuming and related industries and a loss of domestic production value of \$65 to 190 billion annually."

Vinyl chloride goes into the manufacture of such diverse products as sporting goods, packages, phonograph records, electric insulation, floor tiles, clothing and paints.

While fewer than 7,000 American workers are directly involved in making vinyl chloride and turning it into polyvinyl chloride, scientists suspect that hundreds of thousands of associated workers may be exposed to the danger. Dr. Irving J. Selikoff, who was instrumental in linking asbestos to cancer, said "the hazard might not stop at the factory gate but...might invade workers' homes and the neighborhoods about vinyl chloride-polyvinyl facilities, (and) that transport and storage might present unsuspected risks."

Selikoff lauded both chemical companies and their labor unions for working together to resolve a problem that is "central to major U.S. industry."

Earle F. Webster, representing five companies that use the chemical to produce conveyor belts, warned of a "serious economic disaster" in the event the rule is implemented. He urged the Occupational Safety and Health Administration to "temper your decision."

A Labor Department environmental impact statement disputed the industry prediction of massive economic dislocations. While noting that some marginal firms may be affected, the report said there is no evidence that the health rules will eliminate the production or use of vinyl chloride.

And the AFL-CIO called the industry's economic warning a form of blackmail, charging that the chemical companies have ignored "overwhelming medical evidence" about the vinyl chloride danger.

United Rubber workers President Peter Bommarito said the AFL-CIO supports the "no detectable level" standard, even at risk of losing some jobs.

The plastics industry is proposing exposure standards that become gradually tougher over time, but which would still remain more lenient than the government's "no detectable level" requirement. The public hearings resume today at the Labor Department.

23217139

HILL AND KNOWLTON, INC.
633 THIRD AVENUE
NEW YORK, N. Y. 10017
212-697-5000

Memo to: Ralph L. Harding, Jr.

Date: June 18, 1974

From: Martin R. Haley

Copies: Messrs:
Thomas J. McGrath
E. S. Nuspliger
John Lawrence
Jerome Heckman
Cleveland Lane
Fred Sutro
Donald H. Bryan
William A. Durbin
James M. Kiss
Jerald Blizin
Matt Swetonic ✓
James H. Moore
Donald W. White

Subject: VCM Support Program

We enclose the final drafts of the Action Memorandum and Backgrounder which are being delivered to the lead persons in each of the VCM and PVC companies on Wednesday morning, the nineteenth.

Telephone follow-ups will begin that afternoon to each company. One of the most experienced and veteran support system managers in the country, Paul Andrews, our Northeast government relations specialist, is in charge of the follow-ups. He will build the bridge between the VC man and the political activator in each company, learn and assess what they have done so far, and discuss in detail each support possibility on the checklist, to obtain commitments of what they will be doing. Paul will then check back as necessary and advise whichever contact develops in each company of ways to intensify their support operation.

Throughout, the program is directed at Congress in order to get a double benefit: stimulating the Congressman, who will certainly send each communication immediately to OSHA as an inquiry from his office.

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Page 2

About 4:00 p.m. each afternoon, that day's contacts and results will be summarized and a report sent to you and those receiving a copy of this memorandum.

A side benefit - but an important one - will be the inevitable further development of the Support System. This operation will probably continue until the twenty-sixth or twenty-seventh, or as long as need be to obtain maximum results. Congress and OSHA should begin feeling it on Thursday the twentieth and, with a little luck, it should peak by Monday the twenty-fourth.

Best regards.

MRH/pc

Attachments

23217141

SP

THE SOCIETY OF THE PLASTICS INDUSTRY, INC.
250 PARK AVENUE • NEW YORK, NEW YORK 10017 • 212/687-2675

June 17, 1974

URGENT MEMORANDUM

TO: Vinyl Monomers and PVC Producers Committee

We all understand the absolute urgency of putting into effect immediately the strongest program possible to present the industry's position on a standard for exposure to vinyl chloride monomer.

As you well know, the OSHA hearings begin next Tuesday. This memorandum recommends practical steps which you can take immediately to strengthen your position before OSHA.

It is imperative that each company tell its story directly to its representatives in Congress, so that they will communicate their concern to OSHA and related federal bodies. (Members of the Senate and House with whom you communicate may very well have different ways of helping to strengthen our position. It is best simply to ask their help and leave the method and government targets up to them.) A second but vitally important reason for acting immediately is to counteract positions favoring an unreasonable standard, being advocated by others. Our position is clear: optimum practical engineering solutions to assure optimum worker safety.

We enclose a basic information piece which states the problem and the industry's policy. This material should be useful for all public affairs efforts.

We urge you to take the following steps within 24 hours after receiving this communication:

23217142

- (1) Write and telephone the members of the United States Senate and House of Representatives whom you are best able to contact.
- (2) Especially in areas which will suffer economically, ask the following organizations to communicate their concern to House and Senate members:
 - (a) Governors' offices.
 - (b) State political parties.
 - (c) State industrial development agencies.
 - (d) State chambers of commerce and manufacturers' associations.
 - (e) Local chambers of commerce.
 - (f) Mayors and city councils.

You may be sure that members of the Senate and House will make very effective use of these communications.

You may wish to ask your public affairs or government relations department to implement this program. You will receive a call very soon from a representative of SPI; please feel free to refer him to whomever is executing this program in your organization. Speed is essential, and our representative who calls you may be able to help. And to the extent possible, we would appreciate learning what steps you may have taken already.

You may be sure your efforts are of the highest importance to doing everything possible in this critical moment for the industry.

Ralph L. Harding, Jr.
President

23217143

VINYL CHLORIDE

HEARING OF THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION ON PROPOSED PERMANENT STANDARD OF VCM EXPOSURE LEVEL TO WORKERS

BACKGROUND OF THE PROBLEM

In January of this year, it was found that angiosarcoma -- a rare cancer of the liver -- had been discovered as the cause of death among several workers in the U.S. and Europe involved in processing vinyl chloride (VCM), the monomer that is converted into polyvinyl chloride (PVC), used in countless consumer and industrial products such as electrical insulation, transportation, furniture, floor tiles, construction, pipes, paint, packaging, and phonograph records.

Earlier this year, the Occupational Safety and Health Administration (OSHA), of the U.S. Department of Labor proposed an emergency standard to be effective April 5, setting an exposure level of 50 parts per million of VCM in air.

In May, OSHA proposed a permanent standard to reduce the exposure level of VCM to workers to a "no detectable level." Since such a standard would threaten the very existence of the industry, SPI urged OSHA to hold hearings so that industry could present its plans to assure worker safety and still permit a vital industry to continue operating.

OSHA HEARING

Beginning on Tuesday, June 25, and continuing most probably for the rest of that week, OSHA will hold a public hearing at Washington on its proposed permanent occupational standard for exposure to VCM. Both OSHA and The National Institute of Occupational Safety and Health (NIOSH) have recommended a "no detectable level" standard.

23217144

OSHA's proposed permanent standard will be supported, in all likelihood, by organized labor, segments of the medical community, and by various consumer and environmentalist groups. It can be expected that organized labor and its supporters will actively undertake -- both prior to and during the hearing -- to elicit public and possibly governmental support for its position.

THE INDUSTRY'S POSITION

SPI and several SPI member companies involved in VCM and/or PVC production will appear on behalf of the industry at the OSHA hearing. SPI's position can be summarized as follows:

- It is not technically feasible to reduce occupational levels of VCM to a zero level of exposure -- the standards recommended by OSHA and NIOSH.
- SPI will propose to OSHA that a stepped reduction in VCM exposure levels be effected over the course of the next several years as a continuation of what the industry has already accomplished technologically.
- It has not been demonstrated that a health hazard exists to VCM and PVC workers at the levels recommended by SPI. Notwithstanding, the industry has an acute sense of its responsibility and obligation to the health of its workers and will take all practical measures necessary and possible to preserve such health.
- PVC products play an important economic and sociological role in our society. Any unrealistically strict standards imposed by OSHA would deprive our nation and its economy of many valuable and beneficial products.
- Should PVC be eliminated, the economic and social hardships would be extremely severe in terms of lost production and lost jobs. In a study completed recently by Arthur D. Little -- the well-known research firm -- it is estimated that minimal losses to the American economy could amount to at least 1.6 million jobs and \$65 billion in production and sales.

VINYL CHLORIDE

HEARING OF THE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION ON PROPOSED PERMANENT STANDARD OF VCM EXPOSURE LEVEL TO WORKERS

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HILL AND KNOWLTON, INC.

633 THIRD AVENUE
NEW YORK, N. Y. 10017
212-697.5600

Memo to: Ralph L. Harding, Jr.

Date: June 19, 1974

From: Martin R. Haley/Paul Andrews

Copies: Messrs:
Thomas J. McGrath
E. S. Nuspliger
John Lawrence
Jerome Heckman
Cleveland Lane
Fred Sutro
Donald H. Bryan
William A. Durbin
James M. Kiss
Jerald Blizin
Matt Swetonic
James H. Moore
Donald W. White

Subject: VC Support Activities - Status Report No. 1

Following are the results of our initial survey on support activities. An additional recommendation was made to all persons contacted, that they bear in mind what their payrolls mean to local banks. This suggestion was well received. (We are certain that you already know the information about witnesses and testimony but since it is an integral part of the reports given us by telephone, we include it in the material below.)

Company: B. F. Goodrich Chemical Co.
Location: Cleveland, Ohio
Contact: Mr. Tony Vittone

Goodrich is very much aware of the problem. They will be represented in Washington and will testify for their own company as well as for SPI. Goodrich has done practically everything on the list, and Mr. Vittone was very cordial and pleased that this program is being given systematic, personal follow-up.

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Company: Diamond Shamrock Chemical Co.
Location: Cleveland, Ohio
Contact: Mr. Harry E. Connors

Diamond had written to all of their customers some time ago, asking them to write letters. They will have six representatives at the hearing in Washington on Tuesday. They are definitely very active and interested in the support recommendations.

Company: Goodyear Tire & Rubber Co.
Location: Niagara Falls, New York
Contact: Mr. John Gilmore, Plant Manager

Goodyear has filed objections and will testify. They are supplying one of their best witnesses to SPI and have contacted all customers. They are going to prudently work on the other suggestions.

Company: Hooker Chemical Corporation
Location: Burlington, New Jersey
Contact: Mr. R. J. Abramowitz

They are just in the process of having an industrial relations meeting with their people, and will follow through. Copies of the suggestions are being distributed for their people to act on. Hooker has written to all customers and asked them to contact their Representatives and Senators. Mr. Abramowitz will testify. He thought the suggestion regarding the banks was a good one.

Company: Olin Corporation
Location: Stamford, Connecticut
Contact: Mr. Henry Bialecki

Mr. Bialecki reported that Olin will have two representatives, and will offer written and oral testimony. Mr. Bialecki is very aware of the problem and is very active on it. It was suggested to him that he talk with Mr. Joe Fahey of State National Bank, which has a branch in Stamford.

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Company: Stauffer Chemical Co.
Location: Westport, Connecticut
Contact: Mr. Lee B. Kuhn

They are deeply involved. Stauffer will not have verbal witnesses but will present written testimony. Through their written presentation they will be testifying both for themselves and for the industry.

Company: Uniroyal Chemical
Location: Naugatuck, Connecticut
Contact: Mr. Jerry Twomey

They will have several representatives, one of whom will speak. Uniroyal has written a general letter to all customers; so far, they have received 170 replies from customers who have contacted Washington. It was mentioned that an Indiana Congressman is trying to repeal the function of OSHA. Uniroyal estimates that more than half of the House and Senate have been contacted by their customers.

On a confidential basis, with no name of company given, we were informed that one of the major manufacturing companies in America is using their top lobbyist to appear in opposition to the proposed regulations, not speaking for SPI or any association but only for their own business. They may tell the committee that they may be forced to close down if this goes through.

MRH/PA/pc

23217148

HILL AND KNOWLTON, INC.
633 THIRD AVENUE
NEW YORK, N. Y. 10017
212-697-5600

Memo to: Mr. Ralph L. Harding, Jr.

Date: June 20, 1974

From: Martin R. Haley/Paul Andrews

Copies: Messrs.
Thomas J. McGrath
E. S. Nuspliger
John Lawrence
Jerome Heckman
Cleveland Lane
Fred Sutro
Donald H. Bryan
William A. Durbin
James M. Kiss
Jerald Blizin
Matt Swetonic ✓
James H. Moore
Donald W. White

Subject: VC Support Activities - Status Report No. 2

Company: General Tire & Rubber Co.
Location: Akron, Ohio
Contact: Mr. Robert W. Laundrie

Mr. Laundrie referred the Harding memorandum to his public relations people. They will be present at the hearing and will present a paper for the record. Mr. Laundrie felt certain that when the public relations man receives the memorandum, he will act on it. (We plan to go back to the Public Relations Department.)

Company: Great American Chemical
Location: Fitchburg, Massachusetts
Contact: Mr. A. W. Fuhrman

Mr. Mel Rosensaft, the company president, is sending letters to every group mentioned in the memorandum (senators, representatives, chambers of commerce, banks). He will be present at the hearing in Washington and will be there Sunday night at the meeting. Great American has sent about 200 to 300 letters to customers as well as to such groups as shoe and rubber manufacturers associations, asking that they write letters also.

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One of their customers wrote to OSHA "raising hell". OSHA answered (which appears to be most unusual), in terms of saying "we will certainly give attention to the economic impact of this situation."

Company: PPG Industries
Location: Pittsburgh, Pennsylvania
Contact: Secretary to Mr. Zeb G. Bell, Jr.

Mr. Bell is scheduled to make a presentation at the hearing. He has received the Harding memorandum. (We will give this further follow-up.)

Company: Tenneco, Inc.
Location: Piscataway, New Jersey
Contact: Mr. Joseph Fath

Mr. Fath will appear at the hearing and will be accompanied by Dr. Lobo and Mr. Phil Scarito, his works manager. Mr. Fath is in almost daily contact with Mr. Harding and Mr. McGrath. He has had letters sent to customers and is generally following the pattern outlined in the memorandum.

Company: Air Products & Chemicals
Location: Wayne, Pennsylvania
Contact: Mr. A. Ross Adams

Mr. Adams will be in Washington Saturday evening at the meeting, and will testify at the hearing. He will try to make his presentation on Thursday and have with him a medical consultant, Dr. Paul Kotin. He has contacted customers, senators and representatives. Letters from his customers have been "going like mad" to Congress. He expects to meet with Mr. Harding this weekend.

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Company: Firestone Plastics Co.
Location: Pottstown, Pennsylvania
Contact: Secretary to Mr. Todd C. Walker

Mr. Walker will be in Washington at the meeting with Mr. Harding on Saturday. He will also speak Tuesday at the hearing. They have sent letters to all customers.

Company: Borden Chemical Co.
Location: Leominster, Massachusetts
Contact: Mr. H. A. Peed

Mr. Peed was very courteous. All of their activities are handled by James McCorry, director of Public Relations, in Washington. Everything in regard to the hearing would be handled by Mr. McCorry. Locally, Mr. Peed has contacted all representatives and senators. (We will follow up with Mr. McCorry.)

Company: Dow Chemical Co.
Location: Midland, Michigan
Contact: Mr. G. J. Williams

Mr. Williams has sent the Harding memorandum to their Washington office manager, Mr. C. T. Marck, who handles all of Dow's affairs in Washington. (We will follow up with Mr. Marck.)

Company: Continental Oil Co.
Location: Saddle Brook, New Jersey
Contact: Dr. Kennedy

Two people will attend the hearing. Dr. Kennedy was in the process of preparing a position paper to be presented. They have contacted customers extensively, and recently sent three men to an American Footwear meeting. This matter is evidently of vital interest to American Footwear. He agreed to contact representatives and senators, and was extremely cooperative and helpful.

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Company: Robintech, Inc.
Location: Fort Worth, Texas
Contact: Dr. John Ertel

Dr. Ertel is a member of the SPI health subcommittee, and had just returned from the meeting held in Springfield, Massachusetts, chaired by Monsanto, for the purpose of lining up the medical side of the story for the hearing. He mentioned the presentation on the economic situation which is being prepared and will be presented. He is actively working on the points in the memorandum.

MRH/PA/pc

23217152

HILL AND KNOWLTON, INC.

633 THIRD AVENUE
NEW YORK, N. Y. 10017
212-697.5600

Memo to: Mr. Ralph L. Harding, Jr.

Date: June 21, 1974

From: Martin R. Haley/Paul Andrews

Copies: Messrs.
Thomas J. McGrath
E. S. Nuspliger
John Lawrence
Jerome Heckman
Cleveland Lane
Fred Sutro
Donald H. Bryan
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Jerald Blizin
Matt Swetonic ✓
James H. Moore
Donald W. White

Subject: VC Support Activities - Status Report No. 3

Company: General Tire & Rubber Co.
Location: Akron, Ohio
Contact: Mr. Carl Dangel, Dir. of Public Relations

Mr. Dangel has received the Harding memorandum and is aware that Mr. Laundrie will appear at the hearing. Mr. Laundrie is now in the process of having a meeting with Mr. Markusson, the attorney for General Tire, in which they will be formulating more up-to-date plans of attack for the meeting. They are definitely going to activate the suggestions on page two of the memorandum, and have already attempted some of it. They have very definite and important contacts with Congress. The wife of their director of advertising is the office manager of Congressman Seiberling's office in Akron. Mr. Markusson will also attend the hearing.

Company: Borden, Inc.
Location: Washington, D.C.
Contact: Mr. James McCorry

Mr. McCorry has received the Harding memorandum. He has already been in contact with Senator Taft, and has an appointment with Congressman

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Steiger on Thursday. Both of them are on the OSHA oversight committee. Mr. Steiger is also co-author of the bill which became law. They are going to see the other Senators and Representatives on the oversight committee. They have sent letters to customers. Their customers are all on allocation of material because their output of the product has been reduced ten percent because of the 50 ppm present ruling. They have contacted and have had many calls from fabricators who are working on this. The recording people are very active and are lobbying and working on the problem.

Company: Dow Chemical Co.
Location: Washington, D.C.
Contact: Mr. C. T. Marck

They are affirmative on contacting Congress; however, their approach is to inform and educate rather than pressure. They are preparing a memorandum for Congress on this basis. They are moving slowly until they know what may happen regarding a new standard. They are definitely working and using a little different approach.

Company: Ethyl Corporation
Location: Baton Rouge, La.
Contact: Mr. Palmer Brown

Ethyl plans to do nothing at the meeting but does intend to send a letter after the hearing on the basis that they question what effectiveness any general action would be prior to the knowledge of what the results of the hearing are going to be. They are considering and probably will contact Senators and Representatives. They have a Washington lobbyist, David Batson, who will be the one to contact Congress after the hearing. A Dr. Rinehart will be at the hearing.

Company: Union Carbide Corporation
Location: New York, New York
Contact: Mr. Arthur B. Steele

He is more involved personally. He will be in Washington Sunday, and will meet with Mr. Heckman Monday to help plan the approach. UCC will make an oral presentation, probably on Tuesday. They have written

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1,200 customers asking them to write to Mr. Stender of OSHA stating their concern. They have received stacks of copies of letters sent out. They are not intested in contacting members of Congress until results of the hearing are known. They feel it is premature to stir up Washington ahead of specific knowledge. (This is in line with our discussion with Vern Larson yesterday in Pittsburgh. Their Washington operation is sophisticated and can provide good post-hearing follow-up.)

Company: Goodyear Tire & Rubber Co.
Location: Akron, Ohio
Contact: Mr. D. H. Francis

They feel they will be more effective after the hearing, regarding people to be contacted. Their government relations people are looking at the problem very carefully. Mr. Francis will attend the hearing and make an oral presentation from Goodyear's point of view. Mr. Beebe will make a presentation directed toward SPI's position. They are very cooperative and very well tuned in on the matter.

Company: Pantasote Co. of New York
Location: Passaic, New Jersey
Contact: Mr. Jack Jaglom

Mr. Jaglom has contacted both New Jersey Senators. He is planning to talk with Mr. Heckman on Sunday. He has talked to New Jersey state senators and local Congressmen. He will appear at the hearing but is not sure if he will speak. He has also contacted the local Chamber of Commerce.

Company: PPG Industries
Location: Pittsburgh, Pa.
Contact: Dr. Zeb G. Bell, Jr.

Dr. Bell is going to make a ten minute presentation along the lines of the number of people they employ, technical information, etc. Their position is slightly different because they believe there should be separate

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standards for various parts of the industry, not just one standard. They have had very slight contact with customers regarding this because most of their customers are members of SPI and have their own g.r. operation. At some point he would be in contact with Senators and Representatives who are directly concerned with the problem. He knows every member of the OSHA group on a first name basis. He has had two phone calls from them recently requesting information on some technical matters. He is hoping that when standards are developed he will be called in for consultation to help write them. His follow-up from the g.r. point of view would be directed to the ones he feels need information. He intends to meet with John Stender, Deputy Secretary of Labor for OSHA.

MRH/PA/pc

23217156

HILL AND KNOWLTON, INC.
633 THIRD AVENUE
NEW YORK, N. Y. 10017
212-697.5600

Memo to: Mr. Ralph L. Harding, Jr.

Date: July 1, 1974

From: Martin R. Haley

Copies: Messrs:
Thomas J. McGrath
E. S. Nuspliger
John Lawrence
Jerome Heckman
Cleveland Lane
Fred Sutro
Donald H. Bryan
William A. Durbin
James M. Kiss
Jerald Blizin
Matt Swetonic ✓
James H. Moore
Donald W. White

Subject: Interim Report on VCM Support Program

With your receipt of Report No. 3 on this support operation, all the rounds of the companies were made and the telephone work completed. Paul Andrews commented that in all his years of activating support programs he had rarely seen such a cooperative and active response. We may be absolutely certain that a level of activity (part of which already existed, of course) far above average was generated.

Partly for this very reason and also for reason of the apparent length of the hearings, we have now halted the stimulation of support. Its effect will be felt over the next four to six weeks.

The machinery is in place and the system is functioning. At the end of the OSHA hearings we should all assess the situation and then decide whether to make a second round of the companies for additional activity, if it seems necessary and wise at that time.

Best regards.

MRH/pc

23217157



THE SOCIETY OF THE PLASTICS INDUSTRY, INC.
250 PARK AVENUE • NEW YORK, NEW YORK 10017 • 212/687-2675

Contact: Jerry Blizin
(202) 638-2800

For Release: August 21, 1974

SPI URGES FACTS NOT PASSION IN
FEDERAL EVALUATION OF VINYL CHLORIDE

Washington-The Society of the Plastics Industry (SPI) today urged that facts not passion be the guiding factor in determining government reaction toward vinyl chloride, an industrial chemical recently linked with angiosarcoma of the liver, a rare cancer, among previously heavily exposed workers.

In testimony prepared for presentation at a hearing of the Subcommittee on the Environment of the Senate Commerce Committee, Ralph L. Harding, President of SPI, said that "decisions and policy judgements with regard to chemical substances must be made on the best available fact-finding basis. Supposition and conjecture cannot be relied upon to make these decisions."

Mr. Harding further asked that "all involved should approach this task in a manner that permits us to make laws and regulations which fit Aristotle's description: "The law is reason free from passion."

In the body of his presentation, Mr. Harding outlined the genesis of the problem, pointing out that "the nation's awareness of the vinyl chloride problem followed the voluntary disclosure in January of this year by the B. F. Goodrich Chemical Company that four vinyl chloride workers" in one of that company's plants had died of the disease

"Certainly, the plastics industry has not shrunk from its worker and environmental responsibilities to date nor does it intend to," he said.

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Among the major points raised by Mr. Harding in his testimony were the following:

--All of the 13 worker deaths in the U.S. from angiosarcoma of the liver occurred in plants more than 20 years old, where "the levels of exposure were substantially higher than those which prevail in the industry today."

--The Environmental Protection Agency, on June 11, stated that there is no scientific evidence to indicate that emissions from vinyl chloride plants "pose an imminent hazard to people living near these plants."

--The direct applicability of animal test results to the human condition is questionable and must be viewed with caution. "For example," Mr. Harding stated, "it is known that some of the test animals used to date are significantly more sensitive to the development of angiosarcomas than humans."

--In the only study to date that has compared past exposure levels with disease, the results show a general cancer increase among heavily exposed workers (above 200 parts-per-million on a time-weighted-average for an eight hour day) but none among workers below that level. This study, Mr. Harding explained, "tends to show that low levels of VCM (vinyl chloride monomer) exposure do not result in an excess of disease."

--If the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it could cost the nation's economy 1.7 to 2.2 million jobs and \$65 to \$90 billion annually in lost production. "Even these figures may be conservative," Mr. Harding said. General Motors Corporation recently stated that "a severe reduction in the production of vinyl chloride would directly affect 50,000 GM employees and that the 'ripple effect' in GM-related layoffs could possibly reach 1.8 million workers."

23217159

Vinyl chloride is used primarily to produce polyvinyl chloride (PVC), a widely used plastic resin, which is in turn fabricated into a wide variety of products, including flooring, pipe, curtains, upholstery, phonograph records, telephone equipment, insulated wire, bottles, packaging, luggage, sporting goods and many others.

STATEMENT OF RALPH L. HARDING JR.
PRESIDENT, THE SOCIETY OF THE PLASTICS INDUSTRY, INC.
BEFORE THE SUBCOMMITTEE ON THE ENVIRONMENT,
SENATE COMMITTEE ON COMMERCE

AUGUST 21, 1974

Mr. Chairman and members of the subcommittee, my name is Ralph L. Harding, Jr., president of The Society of the Plastics Industry, Inc. Accompanying me today is Jerome Heckman, of the Washington law firm of Keller & Heckman who serves as general counsel of SPI, and who will assist me in responding to any questions which you and members of the subcommittee may have. The Society of the Plastics Industry, Inc. is the principal trade association and spokesman for the plastics industry, representing approximately 1,400 member companies who supply raw materials, process or manufacture plastics or plastics products, engineer or construct molds or similar equipment used by the plastics industry, or engage in the manufacture of machinery needed to manufacture plastics products or materials. The membership of SPI is responsible for the sale of approximately 75 percent of the total dollar volume of U. S. plastics sales, according to industry estimates. Additionally, the Society's Vinyl Chloride and Polyvinyl Chloride Resin Producers Committee represents more than 90 percent of United States capacity for the production of vinyl chloride and polyvinyl chloride resins.

To summarize briefly, vinyl chloride is a chemical which is the raw material from which polyvinyl chloride, the nation's most versatile thermoplastic polymer, is formulated. The estimated total PVC production for 1974 is approximately five

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billion pounds, which is the second largest volume of any plastic produced in this country. Because of its versatility, PVC has important end use applications in building and construction, the motor vehicle industry, apparel and home furnishings, phonograph records and communications equipment, as well as miscellaneous products which may vary from baby bottles to supermarket meat wrapping and from credit cards to medical tubing. It should be emphasized that vinyl chloride and PVC cannot by any stretch of the imagination be called a new and unknown chemical substance, for manufacture of vinyl chloride in this country began in 1939 and vinyl chloride and the products made from it have, in the main, been in use for more than 30 years.

The largest use of PVC is by the building and construction industry, which accounts for 43% of consumption. Ten percent of PVC production goes into wire and cable which in turn is used in construction of building, automobiles, ships and planes. Factors of safety and electrical properties as well as cost have made PVC a prime material for use in production of insulated wire and cable. Without PVC, it would take a minimum of three to five years to come up with a replacement insulating material. Twenty-five percent of the PVC production in the U. S. goes into the manufacture of pipe. Again, no immediately available and feasible substitute materials are known. 15% of the PVC produced goes into film and sheet for packaging and coated fabrics.

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Another 10% goes into flooring, and 5% is consumed by the phonograph record industry. PVC is regarded as having no known equal as a sealant for bridge and airport construction. The U. S. footwear industry states that it has no substitute for PVC in the manufacture of shoes. The PVC belting industry has similarly said that there is no known substitute for conveyor belting made from PVC--which would affect industries that range from coal mining to grain and processed food handling.

Without further burdening the subcommittee with a recitation of such facts, suffice it to say that PVC is a ubiquitous and critically important material in the industrial and consumer sectors of our economy. That is why representatives of Arthur D. Little, Inc. testified in July at the hearings conducted by the Occupational Safety and Health Administration that an immediate shutdown of the PVC industry could result in the loss of 1.7 to 2.2 million jobs and a loss of domestic production of \$65 to \$90 billion annually. Even these estimates may be conservative. General Motors Corporation submitted a statement for the OSHA hearing record which states that a "severe reduction in the production of vinyl chloride" would directly affect 450,000 GM employees and that the "ripple effect" in GM-related layoffs could possibly reach 1.8 million workers.

It is not our purpose today to elaborate further on questions of economic impact. We believe that such questions have relevance in the OSHA proceedings with regard to establishing standards for worker safety and SPI comments to these issues are on record before that body. It is a fact, however, that the nation's awareness of the vinyl chloride problem followed the voluntary disclosure in January of this year by the B. F. Goodrich Chemical Company

23217163

that four vinyl chloride workers in that company's Louisville, Ky. plant had died from angiosarcoma of the liver. At the time of the OSHA hearings, 19 worker deaths from liver angiosarcoma had been linked to vinyl chloride exposure, 13 of them in this country, According to Dr. Daniel P. Boyd, director of OSHA's Office of Standards Development, it was OSHA's judgment at the outset of these hearings, which began on June 26, that vinyl chloride is a carcinogenic agent. He based this statement on industrially-commissioned animal toxicological studies performed by Professor Cesare Maltoni of the Instituto di Oncologia, Bologna, Italy, and the Industrial Bio-Test Laboratories in this country, together with the 19 reported liver angiosarcoma deaths. In the ensuing months since January, many agencies of the Federal Government have also become involved in the vinyl chloride problem consistent with their responsibilities. Thus, the Food and Drug Administration, Environmental Protection Agency, Consumer Product Safety Commission, together with the appropriate health research agencies such as the National Cancer Institute and the National Institute for Occupational Safety and Health and the Center for Disease Control have undertaken both regulatory actions and research programs with regard to vinyl chloride and polyvinyl chloride.

There seems to be no dispute at this time that vinyl chloride monomer is a carcinogen in both man and animals. However, it must be emphasized that the information developed thus far does not yet constitute a body of "hard data" on the totality of the vinyl chloride hazard.

It is apparent that the first signs of the biological effects of vinyl chloride inhalation do not become visible until after many years of exposure. With vinyl chloride, the latency period has averaged around 20 years. However, it has been difficult to pinpoint and correlate the known cases of disease with past

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levels of exposure, in part due to lack of past exposure data. The best evidence thus far indicates that the workers who died were exposed to high levels of vinyl chloride for long periods of time. The only study to date that has compared exposure levels with disease, or the lack of it, was conducted by the the Dow Chemical Company at its Midland division. The results show a general cancer increase among heavily exposed workers (above 200 parts per million on a time-weighted average for an eight-hour day) but none among workers below that level. No angiosarcomas were found. In general, the Dow study tends to show that low levels of VCM exposure do not result in an excess of disease.

The OSHA record also establishes that there are 36 vinyl chloride plants in the United States and that the 13 known worker deaths occurred among the employees of four plants--seven at one plant, three at another, two at a third plant and one at a fourth. All four plants involved are more than 20 years old. Again, while it is not precisely known what the exact levels of past exposure were at these plants, testimony developed at the OSHA hearings indicates that the levels of exposure were substantially higher than those which prevail in the industry today. Four other vinyl chloride plants in the U. S. are more than 20 years old but had no angiosarcoma cases, which may indicate that operating levels were below the threshold needed to cause the disease.

Because of the difficulty in establishing the exact level of hazard, great importance has been placed on the animal studies conducted in Italy and the United States. The results of these tests thus far can be summarized as showing:

1. Angiosarcoma of the liver is both time and dose-related--the heavier the exposure the more animals become diseased; and the longer the exposure, the

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greater chance for contracting the disease.

2. Angiosarcomas have been detected in old test animals (rats) at exposure levels of 50 parts per million. Deaths in mice have been reported at 50 ppm.

3. Other neoplasms in addition to angiosarcoma have been reported by Dr. Maltoni in his animal test work as being VCM-related.

Great speculation has centered around this rather narrow body of test data, the critical point being whether the animal results are translatable to human experience and to what degree. For instance, it is known that some of the test animals used to date are significantly more sensitive to the development of angiosarcoma than humans.

The question of VCM hazard extending beyond those areas of maximum exposure in the polymerization process is also an open one. During the OSHA hearings, NIOSH included two "fabricator" angiosarcoma cases, one involving a worker who operated a wire-insulating machine and an accountant not directly employed in fabricating, but whose work allegedly required frequent trips into the PVC plant where he was employed. Similarly, the Center for Disease Control published in its June 15 morbidity and mortality report, indications of two angiosarcoma cases occurring among longtime residents of the Bridgeport-Stratford area in Connecticut, neither of whom had any direct occupational exposure but lived for long periods of time in the vicinity of the electrical products and the PVC processing plants mentioned above.

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Since angiosarcoma of the liver is known to result from other causes, the significance of these cases is at this point difficult to determine. The CDC report stated that additional studies would be needed to define the risk factors for PVC workers and that in the suspected community exposure cases, the findings established no causal connection. Because most PVC processing plants currently operate at extremely low exposure levels except in mixing, storage, or unloading areas, SPI is of the view that worker risk in such facilities is probably non-existent.

The Environmental Protection Agency, on June 11, 1974, stated that based on preliminary monitoring results at seven chemical companies, including two vinyl chloride and 10 polyvinyl chloride plants, "there is no scientific evidence to indicate that these emissions pose an imminent hazard to people living near these plants. However, prudence dictates that reasonable steps should be promptly taken to reduce vinyl chloride emissions to the lowest practical level."

The Society of the Plastics Industry, Mr. Chairman, is certainly concerned about protecting not only the health of workers directly employed in the industry but the public at large. We hold the opinion that the "environmental ethic" must be shared by all segments of society and the industry must carry out its responsibilities in this regard.

However, our position is that decisions and policy judgments with regard to chemical substances must be made on the best available fact-finding basis. Supposition and conjecture cannot be relied upon to make these decisions.

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Thus, in the OSHA proceedings SPI has contended that while needless risk should not be countenanced, where the degree of that risk has or cannot be determined, time should be provided to permit technologically feasible improvements to minimize actual or potential health hazard.

There is, of course, a debate over what constitutes feasible improvements to be resolved before appropriate forums. SPI has proposed in the OSHA proceedings a permissible level standard for PVC resin plants as follows:

1. Effective October 5, 1974, a ceiling of 40 parts per million of VCM and a maximum daily time-weighted average of 25 parts per million (levels above 40 ppm would require the use of respirator protection.)
2. Effective October 5, 1975, a ceiling level of 25 ppm with no time-weighted average. (respirators to be worn at levels above 25 ppm.)
3. Effective October 5, 1976, a ceiling of 25 ppm with a maximum time-weighted average of 10 ppm. (levels above 25 ppm require respirators.)

As regards worker safety, SPI believes this recommendation to be both feasible and capable of protecting employees. Further, SPI believes that adoption of a final workplace safety regulation must not require operational levels which tend to drive out the majority of independent producers and permit the continuance of only a few who, for varying reasons, can meet such levels.

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The chairman, wearing his other hat as a member of the Anti-Trust and Monopoly Subcommittee, is better equipped than I to evaluate this problem.

Certainly, the plastics industry has not shrunk from its worker and environmental responsibilities to date nor does it intend to. The current vinyl chloride problem would not have been avoided even if passage of the Toxic Substances Control Act had been completed during the first session of the 93rd Congress.

Nevertheless, SPI has no quarrel with legislation which attempts to reduce the future impact on human beings and the environment of new chemical substances, providing once again that such legislation recognizes that there are very substantial questions of feasibility involved. In that light, we believe that between the pending Senate-passed S. 426 and the House-passed H. R. 5356, the House language more realistically addresses the problem of pre-market testing and the proper assessment of environmental and human health impact prior to the development of new technologies.

In conclusion, Mr. Chairman, let me state that the plastics industry is no less a passenger on Space Ship Earth than any one else. As corporate and individual citizens we also want an environment which is not fraught with hazard. We therefore ask only that all involved should approach this task in a manner that permits us to make laws and regulations which fit Aristotle's description: "That law is reason free from passion."

23217169

CONTRACTOR
PITTSFIELD, MASS.
E. O. W. 33,000

OCT 1 1974 *E. J. Hill*

Facts Sought in Evaluating Vinyl Chloride

WASHINGTON — The Society of the Plastics Industry has urged that facts, not passion, be the guiding factor in determining government reaction toward vinyl chloride, an industrial chemical recently linked with angiosarcoma of the liver, a rare cancer, among previously heavily exposed workers.

In testimony prepared for presentation at a hearing of the subcommittee on the environment of the Senate Commerce Committee, Ralph L. Harding, president of SPI, said "decisions and policy judgments with regard to chemical substances must be made on the best available fact-finding basis. Supposition and conjecture cannot be relied upon to make these decisions."

Harding asked that all involved approach the task "in a manner that permits us to make laws and regulations which fit Aristotle's description: 'The law is reason, free from passion.'"

Outlined the Problem

Harding said the nation's awareness of the vinyl chloride problem followed the voluntary disclosure last January by B.F. Goodrich Chemical Co. that four vinyl chloride workers in one of that company's plants had died of the disease.

"Certainly, the plastics industry has not shrunk from its worker and environmental responsibilities to date nor does it intend to," he said.

Among the major points raised by Harding were the following:

- All of the 13 worker deaths in the U.S. from angiosarcoma of the liver occurred in plants more than 20 years old, "where the levels of exposure were substantially higher than those which prevail in the industry today."

- The Environmental Protection Agency on June 11 stated that there is no scientific evidence to indicate that emissions from vinyl chloride plants "pose an imminent hazard to people living near these plants."

- "The direct applicability of animal test results to the human condition is questionable and must be viewed with caution [because] it is known that some of the test animals used are significantly more sensitive to the development of angiosarcomas than humans."

- In the only study to date that has compared past exposure levels with disease, results show a general cancer increase among heavily exposed workers (above 200 parts-per-million on a time-weighted average for an eight-hour day) but none among workers below that level. This study tends to show that low levels of VCM (vinyl chloride monomer) exposure do not result in an excess of disease.

- "If the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it could cost the nation's economy 1.7 to 2.2 million jobs and \$65 to \$90 billion annually in lost production. Even these figures may be conservative."

Vinyl chloride is used primarily to produce polyvinyl chloride (PVC), a widely used plastic resin, which is in turn fabricated into a wide variety of products, including pipe.

23217170

BUILDING NEWS
LOS ANGELES, CALIF.
E. O. WEEK 5,000

SEP 6 1974 *Bjell*

SPI Asks That Facts be Used To Decide Vinyl Chloride Fate

— Washington, D.C. — The Society of the Plastics Industry (SPI) urged that facts not passion be the guiding factor in determining government reaction toward vinyl chloride, an industrial chemical recently linked with angiosarcoma of the liver, a rare cancer, among previously heavily exposed workers.

In testimony prepared for presentation at a hearing of the Subcommittee on the Environment of the Senate Commerce Committee, Ralph L. Harding, president of SPI, said that "decisions and policy judgments with regard to chemical substances must be made on the best available fact-finding basis. Supposition and conjecture cannot be relied upon to make these decisions."

Harding further asked that "all involved should approach this task in a manner that permits us to make laws and regulations which fit Aristotle's description: 'The law is reason free from passion.'"

In the body of his presentation, Harding outlined the genesis of the problem, pointing out that "the nation's awareness of the vinyl chloride problem followed the voluntary disclosure in January of this year by the B. F. Goodrich Chemical Co. that four vinyl chloride workers" in one of that company's plants had died of the disease.

Environmental Responsibilities

"Certainly, the plastics industry has not shrunk from its worker and environmental responsibilities to date nor does it intend to," he said.

Among the major points raised by Harding in his testimony were the following:

—All of the 13 worker deaths in the U.S. from angiosarcoma of the liver occurred in plants more than 20 years old, where "the levels of exposure were substantially higher than those which prevail in the industry today."

—The Environmental Protection Agency, on June 11, stated that there is no scientific evidence to indicate that emissions from vinyl chloride plants "pose an imminent

hazard to people living near these plants."

—The direct applicability of animal test results to the human condition is questionable and must be viewed with caution. "For example," Harding stated, "it is known that some of the test animals used to date are significantly more sensitive to the development of angiosarcomas than humans."

Lower Levels

—In the only study to date that has compared past exposure levels with disease, the results show a general cancer increase among heavily exposed workers (above 200 parts-per-million on a time-weighted average for an eight hour day) but none among workers below that level. This study, Harding explained, "tends to show that low levels of VCM (vinyl chloride monomer) exposure do not result in an excess of disease."

—If the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it could cost the nation's economy 1.7 to 2.2 million jobs and \$65 to \$90 billion annually in lost production. "Even these figures may be conservative," Harding said. General Motors Corp. recently stated that "a severe reduction in the production of vinyl chloride would directly affect 450,000 GM employees and that the 'ripple effect' in GM-related layoffs could possibly reach 1.8 million workers."

Vinyl chloride is used primarily to produce polyvinyl chloride (PVC), a widely used plastic resin, which is in turn fabricated into a wide variety of products, including flooring, pipe, curtains, upholstery, phonograph records, telephone equipment, insulated wire, bottles, packaging, luggage, sporting goods and many others.

23217171

PACKASCOPE-USA
PHILADELPHIA, PA.
W. CIRC.N. AVAIL.

SEP 3 1974 *B.H.H.*

SPI TELLS VC
INQUISITORS
TO COOL IT

Ralph Harding, president of The Society of the Plastics Industry, told a Subcommittee on the Environment of the Senate Commerce Committee, that facts, not passion, should be the guiding factor in determining govt reaction toward vinyl chloride. Harding said, among other things: "Decisions and policy judgments with regard to chemical substances must be made on the best available fact-finding basis. Supposition and conjecture cannot be relied upon to make these decisions." He made the following points:

All of the 13 worker deaths in the US from angiosarcoma (why do all the dreadful diseases have such lyrical names? Ed.) of the liver occurred in plants more than 20 years old, where the levels of exposure were substantially higher than those which prevail in the industry today

The Environmental Protection Agency, on 11 June, stated that there is no scientific evidence to indicate that emissions from vinyl chloride plants pose an imminent hazard to people living near those plants.

The direct application of animal test results to the human condition is questionable and must be viewed with caution.

In the only study to date that has compared past exposure levels with disease, the results show a general cancer increase among heavily exposed workers (above 200 ppm on a time-weighted average for an eight-hour day) but none among workers below that level.

If the VC industry were forced to shut down, it could cost 2.2 million jobs and \$65 to \$90 billion in lost production annually.

23217172

DAILY NEWS RECORD
NEW YORK, N. Y.
D. 25,000

AUG 23 1974 *Bjeller*

Plastic Group Warns On PVC Crackdown

WASHINGTON (FNS) — An unnecessary crackdown on vinyl chloride output could cut the nation's over-all production by up to \$90 billion and could throw two million workers out of work, the Society of Plastics Industry, Inc., advised a Senate Commerce Subcommittee.

Ralph Harding, SPI president, told the subcommittee the plastics industry is concerned about protecting health of workers but decisions on chemical substances must be made on best available facts, not supposition or conjecture.

SPI has proposed rules to the occupational Safety and Health Administration for permissible levels of polyvinyl chloride resin plants.

The subcommittee headed by Sen. John Tunney (D.-Calif.) is reviewing the polyvinyl situation.

Tunney conceded in an opening statement that "since vinyl chloride has been around for so long, it now would cause drastic dislocation in the plastics industry."

Harding told the subcommittee PVC has important use in apparel, home furnishings, phonograph records, communications equipment, supermarket meat wrappings and credit cards.

"The U.S. footwear industry states that it has no substitute for PVC in the manufacture of shoes," Harding testified.

The Hartford Times
HARTFORD, CONN.
D. 123,376 SUN. 122,857

AUG 22 1974 *Bjeller*
Chloride Ban

WASHINGTON (AP) — Millions of persons face unemployment if vinyl chloride is banned because it had been linked to cancer, the president of the Society of the Plastics Industry asserted. Testifying before a Senate panel, Ralph L. Harding Jr. said that though cancer-caused deaths were recorded at four plants where the chemical is used, there are other plants where no such fatalities occurred.

Trenton Evening Times
TRENTON, N. J.
D. 81,855

AUG 22 1974 *Bjeller*

Vinyl Chloride Ban Called Job Threat

WASHINGTON (AP) — Millions of persons face unemployment if vinyl chloride is banned because it had been linked to cancer, the president of the Society of the Plastics Industry asserted.

Testifying before a Senate panel, Ralph L. Harding Jr. said that though cancer-caused deaths were recorded at four plants where the chemical is used, there are other plants where no such fatalities occurred.

THE EVENING SUN
BALTIMORE, MD.
D. 201,190

AUG 22 1974 *Bjeller*

Vinyl Chloride Ban, Jobs Loss Tied

Washington (AP) — Millions of persons face unemployment if vinyl chloride is banned because it had been linked to cancer, the president of the Society of the Plastics Industry asserted.

23217173

Chemical Tied to Defects

By William Greider

Washington Post Staff Writer

Workers or consumers exposed to vinyl chloride fumes may suffer genetic damage which will be passed on to their children in the form of physical defects, a Senate Commerce subcommittee was warned yesterday.

Dr. Irving J. Selikoff, cancer researcher and president of the Society for Occupational and Environmental Health, cited three recent studies which suggest that vinyl chloride, used in thousands of plastic products, may be not only a cancer-causing agent but "mutagenic" — creating mutations.

Selikoff's assertion assigns a new element of hazard to the substance which is the basic ingredient in a wide range of domestic products — from plumbing pipes to phonograph records, from plastic wrap used for supermarket produce to upholstery in automobiles.

Earlier this year, it was established that inhalation of vinyl chloride fumes could lead to a rare form of liver cancer among workers or neighbors of the factories. It might even affect consumers if they used certain aerosol spray cans that were fueled with the substance. Research has not yet settled conclusively whether there is also a general danger from the variety of polyvinyl chloride products which are derived from vinyl chloride.

In the meantime, three government regulatory agencies have moved in various ways to restrict pollution from the vinyl chloride plants and to prohibit the use of the chemical in such products as hair sprays and pesticide spray cans.

An industry representative, Dr. Theodore R. Torkelson of the Manufacturing Chemists Association, denied that any "mutagenic" effect on human beings has so far been established by genetic side effects exists and is being studied.

The research cited by Selikoff yesterday included bacteria studies in Sweden; con-

firmed in the United States, which showed mutations when exposed to vinyl chloride. Samplings of human experience are fragmentary at this point, he warned, but they also "give grounds for concern."

At Mt. Sinai Medical School in New York, he said, examinations of 11 vinyl chloride workers found "chromosome changes to be present considerably more frequently than expected." The Ohio Department of Health, Selikoff added, found a pattern of increased birth malformations in three counties where vinyl chloride plants are located.

Selikoff conceded that these findings are preliminary and not conclusive, but said they add to the alarm over expo-

sure to a substance which has become a major ingredient of American manufacturing since World War II.

About 6,500 workers are involved in manufacturing vinyl chloride and its conversion into polyvinyl chloride, but more than 1.5 million men and women work in processing factories where the plastic is made into various articles — the area where the danger is still in debate.

Selikoff said yesterday that his study of a polyvinyl plant in Niagara Falls, N.Y., found significant impact on workers' health, a rate of death due to hemangiosarcoma of the liver which statistically was 1,000 times greater than normally expected.

Ralph L. Harding Jr., presi-

dent of the Society of the Plastic Industry, testified, however, that no research has yet established a broader danger than the direct exposure by inhalation. That warning, he noted, was first raised by the industry itself when a doctor for B. F. Goodrich Co. discovered a recurring pattern of deaths among workers at the Louisville, Ky., plant — four victims of the rare liver ailment.

Yesterday's hearing was held by Sen. John V. Tunney's subcommittee and, though his staff aides denied it, the subject seemed aimed at influencing legislation on "toxic substances" which has already passed both House and Senate and is now before a conference committee.

The Washington Post

WASHINGTON, D. C.

D. 535,016 SUN. 710,148

AUG 22 1974

Byfile

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Oakland ~~4th~~ Tribune
OAKLAND, CALIF.
D. 225,038 SUN. 251,534

AUG 22 1974. *B. Hill*

Job Fears in Ban On Vinyl Chloride

WASHINGTON (AP) — Millions of persons would face unemployment if vinyl chloride is banned because it causes cancer, a Senate panel was told yesterday.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc., noted that 13 vinyl chloride workers have died at four plants. But there are other plants where no such fatalities have occurred, he said.

"There seems to be no dispute at this time that vinyl chloride . . . is a carcinogen in both man or animals," he said. "However, it must be emphasized that the information developed thus far does not yet constitute a body of hard data on the totality of the vinyl chloride hazard."

Harding said the best evidence indicates the workers were exposed to high levels of the chemical for long periods of time.

He said the 13 workers died from liver cancer and had worked in vinyl chloride plants more than 20 years old "where the levels of exposure were substantially higher than those which prevail in the industry today."

He said that if the vinyl chloride industry were forced

to shut down because of an inability to meet government regulations, it would cost the nation's economy 1.7 to 2.2 million jobs and \$165 billion to \$90 billion annually in lost production.

Vinyl chloride is used in making polyvinyl chloride, a widely used plastic resin, which is fabricated in a variety of products including flooring, pipes, curtains, phonograph records, telephone equipment, bottles, packaging and sporting goods.

Dr. Joseph Wagoner, of the Center for Disease Control, pointed out that from 1950 to 1973, a total 109 deaths were observed among vinyl chloride workers.

"The number of deaths from liver cancer in this population was almost 12 times the number expected," he said.

He said one worker who died from liver cancer caused by the chemical was exposed to it for only four years. Eighteen years later he was dead, he said.

"This single case is consistent with the tenants of carcinogenesis—that when the carcinogenic process, even in the absence of continued exposure, is irreversible," Dr. Wagoner said.

23217175

The Atlanta Journal

"COVERS DIXIE LIKE THE DEW"

D. 253,721

AUG 22 1974

B. J. Hill

Vinyl Chloride Hazard Questioned

WASHINGTON (AP) — Millions of persons would face unemployment if vinyl chloride is banned because it causes cancer, a Senate panel has been told.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc., noted that 13 vinyl chloride workers have died at four plants. But there are other plants where no such fatalities have occurred, he said.

"There seems to be no dispute at this time that vinyl chloride . . . is a carcinogen in both man or animals," he said.

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"The number of deaths from liver cancer in this population was almost 12 times the number expected," he said.

The Dallas Morning News

DALLAS, TEXAS

D. 266,667 SUN. 310,530

AUG 22 1974

B. J. Hill

Vinyl Chloride Use Defended

WASHINGTON (AP)—Millions of persons would face unemployment if vinyl chloride is banned because it causes cancer, a Senate panel was told Wednesday.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc., noted that 13 vinyl chloride workers have died at four plants. But there are other plants where no such fatalities have occurred, he said.

"There seems to be no dispute at this time that vinyl chloride . . . is a carcinogen in both man or animals," he said. "However, it must be emphasized that the information developed thus far does not yet constitute a body of hard data on the totality of the vinyl chloride hazard."

He said that if the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it would cost the nation's economy 1.7 to 2.2 million jobs and \$165 billion to \$90 billion annually in lost production.

23217176

JOURNAL HERALD

DAYTON, OHIO

D. 111,867

AUG 22 1974

Ban would cause unemployment

WASHINGTON (AP) — Millions of persons would face unemployment if vinyl chloride is banned because it causes cancer, a Senate panel was told Wednesday.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc., noted that 13 vinyl chloride workers have died at four plants. But there are other plants where no such fatalities have occurred, he said.

"There seems to be no dispute at this time that vinyl chloride . . . is a carcinogen in both man or animals," he said. "However, it must be emphasized that the information developed thus far does not yet constitute a body of hard data on the totality of the vinyl chloride hazard."

Harding said the 13 workers died from liver cancer and had worked in vinyl chloride plants more than 20 years old "where the levels of exposure were substantially higher than those which prevail in the industry today."

He said that if the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it would cost the nation's economy 1.7 to 2.2 million jobs and \$165 billion to \$90 billion annually in lost production.

HOME FURNISHINGS DAILY
NEW YORK, N. Y.
D. 39,000

AUG 26 1974

WASHINGTON (FNS) — Crackdown on vinyl chloride output could cut the nation's production by as much as \$90 billion and could eliminate the jobs of 2 million workers, the Society of Plastics Industry Inc. told a Senate Commerce Committee here.

Ralph Harding, SPI vice president, said the plastics industry is concerned about protecting the health of workers, but that decisions about chemical substances must be made on the best available facts, not on supposition or conjecture.

The Corpus Christi Caller

CORPUS CHRISTI, TEXAS

D. 68,322

AUG 22 1974

Chloride ban opposed

WASHINGTON (AP) — Millions of persons would face unemployment if vinyl chloride is banned because it causes cancer, a Senate panel was told Wednesday.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc. noted that 13 vinyl chloride workers have died at four plants. But there are other plants where no such fatalities have occurred, he said.

"There seems to be no dispute at this time that vinyl chloride . . . is a carcinogen in both man or animals," he said. "However, it must be emphasized that the information developed thus far does not yet constitute a body of hard data on the totality of the vinyl chloride hazard."

Harding said the best evidence indicates the workers were exposed to high levels of the chemical for long periods of time.

He said the 13 workers died from liver cancer and had worked in vinyl chloride plants more than 20 years old "where the levels of exposure were substantially higher than those which prevail in the industry today."

He said that if the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it would cost the nation's economy 1.7 to 2.2 million jobs and \$165 billion to \$190 billion annually in lost production.

23217177

Arkansas Gazette

LITTLE ROCK, ARK.

D. 115,576 SUN. 141,175

Rocky Mountain News
DENVER, COLO.

D. 214,490 SUN. 236,903

AUG 22 1974
**Job losses tied
to total ban of
vinyl chloride**

WASHINGTON (AP) — Millions of persons would face unemployment if vinyl chloride is banned because it causes cancer, a Senate panel was told Wednesday.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc., noted that 13 vinyl chloride workers have died at four plants. But there are other plants where no such fatalities have occurred, he said.

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He said that if the vinyl chloride industry were forced to shut down because of an inability to meet government regulations, it would cost the nation's economy 1.7 to 2.2 million jobs and \$165 billion to \$190 billion annually in lost production.

AUG 22 1974

**Proposed Vinyl Chloride Ban
Described as Threat to Jobs**

WASHINGTON (AP) — Millions of persons would face unemployment if vinyl chloride were banned because it caused cancer, a Senate panel was told Wednesday.

Appearing before the environment subcommittee, Ralph L. Harding Jr., president of the Society of the Plastics Industry Inc., noted that 13 vinyl chloride workers had died at four plants, but said there were other plants where no such fatalities had occurred.

"There seems to be no dispute at this time that vinyl chloride . . . is a carcinogen in both man or animals," he said. "However, it must be emphasized that the information developed thus far does not yet constitute a body of hard data on the totality of the vinyl chloride hazard."

Harding said the best evidence indicated the workers were exposed to high levels of the chemical for long periods of time.

He said the 13 workers died from liver cancer and had worked in vinyl chloride plants more than 20 years old "where the levels of exposure were substantially higher than those which prevail in the industry today."

He said that if the vinyl chloride industry were forced to shut down because of inability to meet government regulations, it would cost the nation's economy 1.7 to 2.2 million jobs and \$90 billion to \$165 billion annually in lost production.

Vinyl chloride is used in making polyvinyl chloride, a widely used plastic resin, which is fabricated in a variety of products including flooring, pipes, curtains, phonograph records, telephone equipment, bottles, packaging and sporting goods.

Dr. Joseph Wagoner, of the Center for Disease Control,

pointed out that from 1950 to 1973, total 109 deaths were observed among vinyl chloride workers.

"The number of deaths from liver cancer in this population was almost 12 times the number expected," he said.

He said one worker who died from liver cancer caused by the chemical was exposed to it for only four years. Eighteen years later he was dead, he said.

"This single case is consistent with the tenants of carcinogenesis — that when the carcinogenic process, even in the absence of continued exposure, is irreversible," Dr. Wagoner said.

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Vinyl Chloride Controversy Lends New Urgency to Interest In Toxic Chemicals Legislation

CHEMICAL MARKETING
REPORTER
NEW YORK, N. Y.
D. 16,000

AUG 26 1974

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Congressional interest in tightening government controls over the introduction of new toxic chemicals into the marketplace is on the rise, stimulated in large measure by the growing public concern over the hazards of vinyl chloride monomer contamination.

A conference committee of the House and Senate met last week to resume its consideration of the two differing versions of the Toxic Substances Control Act. No progress was reported in settling the differences, but the important fact is that the committee held a meeting on the bill for the first time this year. The legislation has been in conference since last Fall.

Two days later the Senate Environmental Subcommittee held a hearing on vinyl chloride to review the actions being taken by the government to safeguard the public and industry workers from the hazards involving the chemical, and to update public information on the results of the many studies in progress.

It was no surprise that the hearing also became the sounding board for renewed demands by some of the witnesses for Congress to get moving and pass a strong toxic substances control law without delay.

But it also served as a place for the plas-

tics industry to renew its appeals that facts, not passion, be the guiding factor in determining government reaction toward vinyl chloride. Ralph L. Harding, president of the Society of the Plastics Industry, said that "decisions and policy judgments with regard to chemical substances must be made on the best available fact-finding basis; supposition and conjecture cannot be relied upon to make these decisions."

Similarly, the Manufacturing Chemists Association, in its statement, stressed that the facts concerning the chemical are not all in, that many research studies are still in progress, and many more are under consideration.

While admitting that the known potential of harm from vinyl chloride justifies stringent precautions in its handling and installation of feasible control measures, Theodore R. Torkelson, of Dow Chemical Company, chairman of a group of industry experts who plan and monitor vinyl chloride research programs under MCA's administration, said:

"With the long completion times required for carcinogenic and other research,
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It is most important that what is done is right rather than to advance the start of a less than ideal experiment."

Testimony that could prove damaging to the future of vinyl chloride was given the hearing by Dr. Joseph Wagoner, director of field studies and clinical investigations of the National Institute for Occupational Safety & Health, Department of Health, Education & Welfare.

Reporting on mortality and morbidity investigations among vinyl chloride workers at two vinyl chloride polymerization facilities, Dr. Wagoner said the deaths of 109 workers between 1950 and 1973 were reviewed. This was slightly more deaths (four) than would have been expected, he said, and the deaths from specific causes were not much different than expected in all but on disease category - cancer.

Follow-up studies and tracing of other workers during this period at the facilities is still going on, he said, but at this stage of the research a "fifty-seven percent increase in deaths due to cancer beyond what would have been expected has already been observed.

"When one looks at the make-up of these excess cancer deaths, it is seen that they are not limited to any single organ system. An excess cancer mortality is observed for the respiratory system, the blood forming tissues, and the brain and central nervous system."

The number of deaths from liver cancer in this population was almost twelve times the number expected. Strikingly, the majority of these excess cancer deaths did not occur until fifteen or more years after first exposure to vinyl chloride. This latent period is consistent with other observations on occupational cancer.

"Three points in particular are noteworthy about this study. First of all, the overall mortality risk is at variance with an earlier reported industry-wide study of vinyl chloride employees which showed a deficit in total mortality because of a disproportionate number of recently hired employees.

Secondly, the results of this study are consistent with a mortality study by Mt. Sinai School of Medicine at another vinyl chloride polymerization facility showing excess cancer and excess total deaths using the same study criteria.

Finally, these results corroborate the animal experimental findings of Dr. Maltoni showing multiple organ involvement."

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