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ADL 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 a 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.

OSHA meanwhile has filed a draft environmental impact statement, as required by the National Environmental Protection Act, on the possible effects of its proposed permanent standard on vinyl chloride. It listed possible adverse impacts as including increased capital expenses for manufacturers, over-all reduced productivity and substitution of scarce raw materials for vinyl chloride.

Possible alternatives listed in the statement include a ban on the manufacture of vinyl chloride, a zero limit to vinyl chloride concentration in workplace air, a limit between 1 ppm and 50 ppm, and sole reliance on personal protective equipment for worker protection.

"It is anticipated that the standard will create no environmental degradation, but rather that it will remove an existing environmental hazard," the statement declared. "Compliance with this proposal will eliminate a potential health hazard to a present working population as high as 700,000 in the monomer, polymer, secondary and tertiary production and use.

"In addition to employee protection, the standard will also reduce the pollution of the environment external to the immediate industrial process through appropriate engineering and workplace controls. Since the scope of the proposal is limited to the workplace environment, it is conceivable that some polymer manufacturers may remove the hazard from the workplace by passing the monomer into the ambient air. Tighter production processes and a purer polymer are a likely effect of the standard, however, that would limit the possibility of further contamination of the external environment.

"The proposal is not without adverse consequences. 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 chloride. It is expected that most companies producing or using vinyl chloride or polyvinyl chloride will be able to absorb such costs, so that the economic impact will be minimal in these cases. However, some firms may incur substantial capital costs in meeting the requirements of the standard.

"The carcinogenic potential of vinyl chloride may also initiate a search for substitutes for vinyl chloride products. In some cases, demand will increase for the known substitutes that are already in short supply or whose harvesting or mining will cause environmental degradation.

"Alternatives to the proposed standard range from a complete ban on the manufacture of vinyl chloride to reliance on personal protective equipment as the sole source of employee protection. A complete ban does not seem warranted by the hazards of vinyl chloride, although subsequent evidence of the toxicological effects of this substance may show that this is necessary. However, alternatives to retain the level at 50 ppm or higher are not viable because of the preliminary results of tests that indicate exposure to vinyl chloride at 50 ppm may constitute a serious health hazard to employees."

On the key question to industry and labor of costs, the environmental impact statement declared:

"Insufficient data at this time precludes an estimate of total cost and the price rise that implementation of the OSHA standard will cause. The existence of marginal firms may be threatened. However, the Occupational Safety and Health Act of 1970 provides low cost loans under the Small Business Act to enable such concerns to comply with any regulations that may be imposed. No evidence to date indicates that promulgation of the proposed standard will stop vinyl chloride production and use, although production in some plants could be curtailed if re-engineering is required. The uses of the polymers and co-polymers of VCM are extremely extensive in our economy, and certain segments are completely reliant upon this material. Thus, most demand can be expected to be sustained even with an increase in cost.

"An increase in product costs may cause eventual substitution of other materials for vinyl chloride, such as wood, metal and rubber. Many of the substitute materials, however, are presently in short supply. In other instances, their acquisition would involve environmental degradation and will increase pressure for exploitation of natural resources. In the case of metals, increased energy demands for the mining, melting and fabrication of the substances may result.

"Offsetting the potential for large-scale substitutions is the fact that the prices for these alternatives are also increasing due to excess demand, shortages of raw materials, and safety and health related costs in these other industries. It is important to note that the production on vinyl chloride also includes utilization of non-renewable natural resources."

Finally, the Environmental Protection Agency has found no demonstrable health hazard to the general public living in the vicinity of plants where vinyl chloride and polyvinyl chloride resin are manufactured, but

as a matter of prudence urged the manufacturers to minimize the discharge of the gas into the environment.

Preliminary sampling of several major plant areas showed that more than 95 percent of the samples collected showed amounts less than 1 ppm. At several of the chemical complexes a number of individual air samples showed more than 1 ppm vinyl chloride. A one-time high of 33 ppm was obtained at one site, although repeated samplings at the site indicated that this level was unusual. The average was in the range of 0.5 to 1 ppm, EPA said.

Here is a list of VC and PVC manufacturing complexes monitored by EPA during May:

B.F. Goodrich Co., Louisville; Borden, Inc., Leominster, Mass.; Goodyear Tire & Rubber and Dow Chemical, both in Plaquemine, La.; B.F. Goodrich and American Chemical Corp., both in Long Beach, Calif.; Uniroyal and Robintech, Inc., Painesville, Ohio; Stauffer Chemical Co. and Diamond Shamrock Corp., Delaware City, Del.; Tenneco, Inc., Flemington, N.J.

OSHA REVISES FIELD OPERATIONS MANUAL FOR COMPLIANCE OFFICERS:

OSHA has issued a field operations manual for use by compliance officers in conducting workplace inspections containing four new chapters reflecting changes in compliance policy.

Significant changes in the new manual include:

- * An expanded definition of the "general duty clause" of the Occupational Safety and Health Act. The clause requires that each employer "shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

The term "recognized" is defined as being of common knowledge or generally recognized in the industry involved, as being detectable. "Serious physical harm" is defined as that which could cause permanent or prolonged impairment, or could cause temporary disability requiring hospitalization.

- * A new definition for "substantial probability" to be used in determining whether an alleged violation is serious. The term is met if the violating condition could result in accident or illness, and, if the accident were to occur, there is a real probability, in light of experience in similar situations, that the result would be death or serious physical harm.

- * A new concept that allows grouping related non-serious violations that, when considered together, represent a serious violation and can be so cited.

- * Elimination of the need to post a "Notice of Imminent Danger" if the employer voluntarily eliminates the danger by making permanent correction of the hazard or provides satisfactory assurance that employees will not be allowed to work in the danger area until the danger is permanently eliminated. If employers do not agree to such "voluntary elimination," inspectors must post the notice and recommend court action to halt work in the area involved.

- * Instructions to be followed in determining which employer to cite in multi-employer situations such as construction sites or industrial parks. They are: "general duty clause" violations will be issued only to employers whose own employees are exposed; an employer may be cited if his own employees are exposed to a hazard, even if he did not create the condition; an employer will not be cited if his employees are not exposed or potentially exposed to a hazard, even if the employer created the condition causing the hazard.

- * Provisions for proposing long-term and multi-step abatement plans based on feasibility of appropriate engineering controls. Included is the requirement that employers must provide employees personal protective equipment as an interim short-term abatement measure.

The new Field Operations Manual will be available to the public as Volume V of OSHA's subscription service. Subscribers will receive the basic manual and any subsequent changes for a single subscription price—\$8 prepaid. It may be ordered from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Orders should specify "Volume V, OSHA Field Operations Manual, OSHA 2081." It is expected to be available in December.

DIFFERING VIEWS ON WORKMEN'S COMPENSATION LEGISLATION PRESENTED:

A parade of witnesses has testified for and against legislation which would, among other things, require state workmen's compensation plans to meet Federal standards.

For example, New Jersey Labor Commissioner Joseph Hoffman said that any pending workmen's comp