

Vinylidene chloride 5.2.0

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OSHA TO PROPOSE PERMANENT NOISE STANDARD AT 90 dBA:

OSHA will issue a proposed permanent standard of 90 dBA for exposure of workers to noise during any eight-hour period, OCCUPATIONAL HEALTH & SAFETY LETTER has learned.

Issuance of the standard was imminent as we went to press, being lodged in the Office of the Solicitor at the Labor Department for final review. Noise has been a real hot potato, perhaps the hottest, among the OSHA standards. A survey conducted by Arthur D. Little said that compliance by industry with a 90 dBA standard would cost billions, and the cost would increase significantly as the standard was lowered. Many labor unions had urged an 85 dBA level, eventually if not immediately.

The standard to be issued by Labor, however, makes no mention of a phased compliance schedule, as did the vinyl chloride standard. It does say that protective devices should be worn by workers if the plant is unable to reduce the noise level below 90 dBA by any other means. Medical surveillance is mandated, including audiometric testing.

C ming up shortly will be proposed permanent standards for arsenic and carbon monoxide. Meanwhile, it is continuing to examine the data on vinylidene chloride as a possible new carcinogen (see story below).

NOW IT'S VINYLIDENE CHLORIDE WHICH MAY BE CARCINOGENIC:

Dow Chemical Co. reported to the Federal Government October 2 that it was informing its employees of studies being conducted in Italy which appear to show that vinylidene chloride may be carcinogenic to test animals at high concentrations. Vinylidene chloride is a chemical raw material used widely in commercial products, notably Saran Wrap, and is best described as an analogue of vinyl chloride. Dow and PPG Industries are considered the largest manufacturers of vinylidene chloride.

Dow has been studying vinylidene chloride response in rats for the last six months and, to date, has found no untoward effects. The study has six more months to go.

A team of Dow toxicologists headed by Dr. V.K. Rowe has been in Italy visiting Prof. Pier Luigi Viola, who has demonstrated that exposure levels of 200 ppm of air of vinylidene chloride had caused liver cancer in rats. Upon learning of the data from Prof. Viola, Dr. Rowe called Midland headquarters and the company immediately alerted the Food and Drug Administration, OSHA and other regulatory agencies.

Dow makes the chemical at Freeport, Tex. and Plaquemine, La. It is then shipped to other Dow facilities or sold to customer companies, where it is combined with vinyl chloride as an intermediate step in making commercial and household transparent wrappings and coatings for paper.

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to no more than 10 ppm, far less than the 200 ppm which affected the rats in Dr. Viola's study. Blair said vinylidene chloride should be more controllable and less hazardous than vinyl chloride because it is a liquid in its natural state rather than a gas.

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Meanwhile, the Society for Plastics Industry has filed a lawsuit in the U.S. Court of Appeals in New York to seek "prompt and complete judicial review" of the OSHA standard on vinyl chloride issued Oct. 2. A companion suit was filed by Hooker Chemical Co. and Firestone Plastics Co. According to Ralph L. Harding, Jr., president of SPI, the action filed in the Appeals Court is simply a petition for the court to review the standard and to examine "the important question of its feasibility."

"We believe now, as we did when we presented our testimony to OSHA only two months ago, that an excessively strict standard cannot be met by the industry. We also believe that the standard announced by OSHA is so restrictive that it merits immediate appeal."

The new standard will replace the 50 ppm in air exposure to vinyl chloride now permitted. The 50 ppm standard can remain in effect until December 31. But starting January 1, 1975, the standard will be one ppm averaged over any eight-hour period and five ppm averaged over any period no longer than 15 minutes. Beginning January 1, 1976, the third phase, wearing of respirators will be mandatory for workers exposed to levels greater than the one ppm and five ppm allowable limits. Until that date, wearing of respirators is discretionary for exposures no greater than 25 ppm.

If the standard was designed to please labor and antagonize industry, it wasn't successful. Neither labor nor industry was entirely satisfied with the standard, and both joined in condemning the discretionary clause governing the wearing of respirators. Peter Bommarito, president of the United Rubber Workers, said the standard was full of loopholes, particularly on the problem of respirators.

And Harding of SPI said the OSHA standard states that beginning January 1, 1976 wearing of respirators shall be mandatory for workers exposed to levels greater than one ppm of vinyl chloride monomer averaged over an eight-hour period and five ppm for any 15-minute period.

"Until that date," Harding said, "the same regulation says wearing of respirators is 'discretionary' for exposures no greater than 25 ppm. Since OSHA's own expert witnesses have testified that respirators are 'instruments of torture,' it appears workers are first being told that there is a level of vinyl chloride exposure which doesn't require donning a respirator but that ultimately those respirators will be mandatory whenever VCM levels reach 25 ppm."

Warning again of dire economic consequences, Harding said that "as we read the OSHA Act and the legislative intent expressed prior to passage, the law was never intended to eliminate the worker's job in order to make it safe nor was it intended to make the worker's eight-hour day the equivalent of a shift on the rack."

The new standard will apply to the manufacture, reaction, packaging, repackaging, transportation, storage, handling or use of vinyl chloride or polyvinyl chloride. It will not apply to the handling or use of products made of polyvinyl chloride.

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Regarding medical surveillance, the standard states:

"The principal questions that have been raised regarding medical surveillance are the necessity and efficacy of requiring specific serum enzyme determinations (SMA-12 series) and the application of medical examination requirements to the fabrication segments of the industry where employees are exposed to lower levels of VC. The objection has also been raised that the specification of tests and procedures interferes with the application of advances in medical knowledge.

"A particular difficulty in considering medical surveillance is that the most commonly discussed lesion, angiosarcoma of the liver, currently cannot be diagnosed until the victim is terminal and, usually, within months of death. Precursor physiologic alterations, which might be reversible, have not yet been directly associated with the lesion. Consequently, there are no specific diagnostic tests which can be prescribed which will determine presence or absence of this tumor at an early stage of development.

"However, most medical witnesses indicated that the medical tests proposed are currently the only ones available which are useful for medical surveillance. Consequently, the specific blood tests proposed have been retained as a minimum requirement to assist the examining physician in determining fitness of potential employees for assignment to workplaces involving VC exposure. In addition, alternative medical examinations may be used where the examining physician determines that they are at least as good as those specified by the standard.

"The Tabershaw-Cooper study and the various animal experiments suggest that VC may produce a wide spectrum of malignant and non-malignant disorders. The general scope of the required medical examination has, therefore, been broadened to include kidneys, skin, connective tissue, spleen, and pulmonary system, as well as the liver. No additional specific procedures or tests are required, but recommendations have been included in the Appendix to assist the examining physician.

"Because of the non-specific nature of the required medical tests, it is not appropriate to prescribe timing, or type of follow-up tests, or to mandate withdrawal from exposure based solely on results of the tests. Instead, the employer is required to obtain a statement from the examining physician of the employee's suitability for continued exposure, when the examining physician has completed such tests as he considers appropriate. The employer is required to withdraw an employee only when this statement indicates that the employee may be at added risk from continued VC exposure.

"As with monitoring, there appears to be no basis for complete exemption of the fabrication industry from the requirement for medical examination. The record does show fabricating establishments with concentrations of VC monitored considerably above the action level. In these instances, medical surveillance of affected employees will provide baseline data for future evaluation of their health, even if both monitoring and medical surveillance are discontinued because improved controls reduce concentrations below the action level. Where exposures are below the action level, the medical surveillance requirements do not generally apply."

STUDY SHOWS DEFECTS IN HOSPITALS' WORKER HEALTH & SAFETY PROGRAMS:

As health care facilities, hospitals have glaring deficiencies in the health and safety programs of their own employees. That conclusion is drawn by NIOSH in the first of seven reports of its national survey of small, medium and large hospitals in 48 states.

On safety and health education, the analysis of results indicates that most hospitals provide some form of general orientation to new employees concerning occupational health and safety, but only slightly more than half of the hospitals present specific job orientation relative to health and safety aspects of their new work assignments.

Hospital size, as indicated by the number of beds, had a significant bearing on the results obtained. About 10 percent of small hospitals either had no orientation or failed to answer, compared to 7 percent medium and only 3.8 percent of the large hospitals.

Only about half of all hospitals, regardless of size, reported having formally organized programs of health and safety education. Results showed more of the large hospitals (70 percent), about half of the medium-sized, and only one-third of smaller hospitals could characterize their health and safety training as being "formally organized."

About 70 percent of all small hospitals reported no formal training on any personal health topic, while 50.7 percent of medium hospitals and 41.7 percent of large hospitals failed to emphasize these topics in training their employees.

Further analyses were made of data from hospitals having formally organized training programs which included routine in-service training on certain specific job hazards (e.g., radiation, chemicals, infectious diseases, etc.) as well as use of safety devices and proper lifting techniques. Irrespective of hospital size, "radiation exposure" control measures was the subject reported with least frequency. In fact, 64 percent of small hospitals, 40 percent of medium and 30 percent of the large hospitals had no routine in-service training programs whatsoever.

Training in the use of personal protective equipment or clothing was the topic most frequently mentioned as being part of routine on-the-job training. Control of infectious disease exposure risks to employees was the next most popular topic; yet, results were far from ideal considering that less than half (47.6 percent) of all hospitals presented any such program, the NIOSH report said.

Most hospitals indicated that their Safety Committee had been assigned the responsibility for managing the hospital's occupational health and safety programs. Except for the Safety Committee, the persons responsible for employee health and safety varied according to the specific function that was queried and especially by size of the hospital.

Administrative assistants were named second to the Safety Committee for "analyses of accident reports," regardless of hospital size. However, when results of the function "conduct safety inspections" were analyzed,