



Environmental News

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EPA URGES PROMPT STEPS BY CHEMICAL INDUSTRY TO REDUCE VINYL CHLORIDE AIR EMISSIONS

Russell E. Train, EPA Administrator, met today with senior executives of the 29 companies which manufacture vinyl chloride and polyvinyl chloride resin to urge accelerated efforts to minimize the discharge of vinyl chloride gas into the environment.

Train recommended prompt tightening and improvement of operating procedures in the manufacturing plants and suggested early consideration of longer-term process modifications.

Train requested that each company begin or continue monitoring emissions from its plants in order to provide more extensive information on the quantities of vinyl chloride entering the environment. EPA will support additional monitoring in cooperation with State and local governments.

Train indicated that a number of the companies represented reported substantial efforts over a period of time to reduce vinyl chloride emissions, as well as monitoring activities, and he stated that the companies in general assured EPA of their desire to provide full and continuing cooperation in finding effective solutions to the problem.

Train called today's meeting after reviewing a summary of EPA's preliminary monitoring results at seven chemical complexes, including two vinyl chloride and ten polyvinyl chloride plants.

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Train stated, "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 emission to the lowest practical level."

At today's meeting, Train briefly summarized the results of the EPA's recent monitoring efforts. He stressed the preliminary nature of the findings. "Only a limited number of samples were taken at each facility under varying meteorological and temperature conditions," Train said. "While we are reasonably confident that our monitoring methods were sound, it is difficult to generalize about ambient conditions from our samples which were limited in time and distribution. Also there were many opportunities for error in the individual measurements made in this pioneering effort. It is clear that considerable additional work is required before we have an accurate picture of the vinyl chloride levels in the ambient air."

On May 31, EPA requested the manufacturers to provide detailed technical and economic information concerning steps that have been and could be taken to reduce vinyl chloride emissions. The information, due June 14, is being sought under Section 114 of the Clean Air Act for possible use by EPA in setting an air pollution control standard for vinyl chloride.

The preliminary monitoring results, which should be further verified by additional monitoring, indicate that the levels of vinyl chloride in the ambient air near the plants fluctuate sharply, apparently due to the periodic opening of polyvinyl chloride reactor kettles, accidental plant discharges, variations in the production process, and meteorological conditions. While almost all of the samples collected contained detectable levels of vinyl chloride, more than 95 percent of the samples showed amounts less than 1 part per million (ppm).

At several of the chemical complexes tested, a number of individual air samples showed more than 1 ppm vinyl chloride. One-time high of 33 ppm was obtained at one site although repeated sampling at this site indicated that this level was unusual. The average at this site was in the range of 0.5 to 1 ppm.

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Most of the air sampling was done within one-half mile of the property lines of the plants. In one case a level of 3.4 ppm was recorded at a distance of three miles from the plant. The average of several readings at this site was approximately 0.5 ppm.

EPA also monitored water effluents, and levels varied considerably depending on the in-plant handling of wastes and treatment of wastewater. The highest level for wastewater leaving the plant site was 20 ppm. More typically, levels of 2 to 3 ppm were found. There is no currently available evidence to indicate that vinyl chloride is present in detectable levels in drinking water. Not unexpectedly, the levels of vinyl chloride entrapped in sludge and other solid wastes from the reactor kettles ranged from 100 to in one case 3,000 ppm.

"At the present time," Train said, "there is no basis for considering that the levels of vinyl chloride detected in water discharges or in sludge if handled properly are hazardous to human health or to aquatic life."

As a precaution, EPA has initiated programs to gather further information concerning vinyl chloride levels in effluent water, drinking water, and sludges; the persistence of vinyl chloride in water; and the effects, if any, of vinyl chloride on aquatic organisms.

Vinyl chloride has been strongly implicated as a cause of a rare but fatal form of cancer, angiosarcoma of the liver. To date, 19 cases of angiosarcoma have been confirmed worldwide in workers at polyvinyl chloride facilities. In all of these cases, the workers had been repeatedly exposed to high levels of the gas over a substantial number of years. It has also been suggested that vinyl chloride may be implicated in several non-worker deaths from this liver cancer. Whether vinyl chloride is the cause of these deaths is still being investigated.

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Results from animal studies, many of which are still in progress, have shown that prolonged exposures to levels of 50 ppm cause this same liver cancer in rats and mice. Train also noted today that the industry recently expanded its support of these studies on the health implications of vinyl chloride at lower doses and urged continued efforts in this regard.

EPA is planning to support epidemiological studies in some neighborhoods near vinyl chloride and polyvinyl chloride plants to further assess the implications of vinyl chloride emissions for the general public.

The Occupational Safety and Health Administration (OSHA) of the Department of Labor, responsible for worker safety, has determined that levels exceeding 50 ppm in the work place present a hazard and has set an emergency temporary standard at that level. To initiate the process for setting a permanent standard, on May 10, OSHA proposed lowering the standard to the level of detection. Public hearings to gather information for a permanent standard and to assist OSHA in making a final judgment as to the adverse effects of vinyl chloride and the appropriate levels of exposure to workers, have been scheduled by OSHA for June 25-28.

Detailed reports on EPA sampling activities at Leominster, Louisville, Plaquemine and Long Beach are available today. Detailed reports concerning the other three complexes are in the final stages of compilation and will be available within several weeks.

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