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Washington D.C. Vinyl Chlorid Hearings
Week of June 25, 1974

I am Mr. Williams, Vice President, Olin Corporation. I will present information and evidence relative to the "proposed standard for vinyl chloride" (29 CFR Part 1910) (Docket OSHA-36) "as published in Federal Register of May 10, 1974." W appreciate this opportunity to express our views.

Olin's Chemicals Group operates a polyvinyl chloride (PVC) plant employing 198 people near Assonet, Mass. The plant produces PVC resin powder from vinyl chloride monomer. At this same location PVC pipe is produced from the resin. Olin also operates two other PVC pipe plants located at Carrollton, Ohio and Miami Florida, employing 109 and 62 people respectively. All of the aforementioned facilities were purchased by Olin between 1967 and 1969.

Shortly after the purchase of these plants, Olin discovered 3 cases of acroosteolysis, a bone extremety disease caused by continued direct contact of the hands with vinyl chloride. Measures instituted by Olin have prevented new cases of this disease. A morbidity and epidemiological study among present employees and all former employees who could be traced, reveals no known cases of angiosarcoma of the liver nor any other occupational related disease. Some of the employees have worked in the Assonet PVC plant for as long as 9 years. (Also some employees had worked in a PVC plant for 11 years before moving to Assonet.)

Since announc ment, in January 1974, of th probable r lationship betw en vinyl chloride and angiosarcoma, Olin has instituted administrative procedural and engineering changes which have significantly reduced vinyl chloride levels in ur Assonet plant. When completed, these changes will have cost Olin about $300,000. Currently, vinyl chloride levels are well below the 50 parts per million (PPM) emergency ceiling established by OSHA in April 5, 1974 Federal Register. Emergency air masks are readily available for use if excursions above 50 ppm occur. Olin requires the use of a full face air mask during reactor cleaning. A thorough medical monitoring program had already been established.

Atmospheric testing programs at our PVC pipe plants have revealed very low levels of vinyl chloride, usually ranging between 0.2 to 1 ppm with occasional readings as high as 4.5 ppm.

Olin is committed to providing a safe healthful work place for its employees. However, we believe that many provisions of the proposed vinyl chloride standard are unnecessarily restrictive and technically or economically infeasible. The evid nc presented by the Society of the Plastics Industries (SPI) supports this contention. Olin is in full agreement with the position represented by the SPI evidence. In particular, we believe the proposed gradual reduction of VC concentation in the work place to a 10 ppm time weighted average (TWA) and 25 ppm ceiling is feasible for Olin to achieve and a safe level for employees based on known scientific and medical evidence.

If a detectible level standard (1 ppm or less) is imposed, it would be necessary for Olin to close its Assonet plant, thus affecting the jobs of 369 people. Our estimate of cost to achieve under 1 ppm vinyl chloride in the work environment is 5.6MM dollars. The replacement (original) cost of this plant is estimated to be _____. It is evident that the ratio of plant investment to "fix up" cost is unreasonable. Furthermore, technical feasibility is assumed, it is not known that specific measures considered and costed out will in fact achieve the desired results. Thus the cost could be higher.

To achieve a TWA VC level of 10 ppm it will be necessary for Olin to spend about 4MM in addition to the $300,000 already spent. As you can see, this is a more reasonable cost compared to original plant cost, yet represents a considerable burden that will be passed on to the consumers of PVC products.

The SPI presentation covered other provisions of the VC standard, however, ther are several elements which Olin believes must be emphasized further.

These are:

1910.93q

(b) (9)

(h) (1) (2) (ii) (iii) and (3)

(i) (3)

Number	PARAGRAPH	SECTION	GROUNDS
1	1910.93q (b) (9) "Exposure" means actual contact with vinyl chloride when unprotected by required personal protective equipment and clothing.	Limits of time and amount of vinyl chloride necessary to constitute an "exposure" are not included in the definition. Also there is no mention of vinyl chloride gas versus vinyl chloride liquid "exposures". The definition of "exposure" could be accepted if 1910.93q (e) (2) did not require "any exposure" to be determined with a confidence level of 95 percent.	It is obviously not feasible to determine actual contact with an infinitely small amount of vinyl chloride for an infinitely short time with a confidence limit of 95 percent. Either the definition of "exposure" or the requirements in regard to monitoring or both should be changed. The definition of "exposure" also relates to 1910.93q (g) (2) pertaining to reporting of incidents inv lving "potential employee exposure." Everything that is done in a polyvinyl chloride polymerization plant has the "potential" for actual contact with vinyl chloride. It is suggested that the term "Exposure" could be defined as follows: "Exposure" means actual contact with vinyl chloride gas in a concentration exceeding the allowable limit in the work environment, or actual contact of the skin with sufficient vinyl chloride liquid to result in vinyl chloride gas concentrations exceeding the all w-able limit in the air adjacent to the employee having such contact.

Number	PARAGRAPH	OBJECTION	GROUNDS
2	(h) Protective clothing (1) employees entering regulated areas shall be provided full-body protective clothing footwear or shoe covers, and gloves, at no cost to them, and required to wear it while in the regulated area.	The specification "protective against vinyl chloride", as defined in (b) (13) is not sufficient for an employer to provide to a supplier of clothing to be sure of meeting the requirements of the proposed regulation.	An ordinary loosely fitting coverall will stop droplets of vinyl chloride liquid from contacting the skin: the droplet will vaporise from such clothing into the surrounding air since the boiling point of vinyl chloride is -13.8°C (+7°F). Would clothing that would prevent contact of vinyl chloride liquid in amounts reasonably likely to be encountered in normal operations be, n rmally sufficient, and a different type of protective clothing in case of accidents? Does protective cl thing have to protect against exposure (actual contact at any concentration) or only keep the vinyl chloride gas concentration between the clothing and the skin below the approved limit of vinyl chloride?
3	(h) (2) Where polyvinyl chloride powder containing detectable levels of vinyl chloride is handled, employee shall also be: (i) Provided and required to wear head coverings;	"head covering" in non-descriptive.	Generally, hard hats are worn by employees, and th se are not always compatable with the use f respirators. Specifically, what type of "head covering" may be used to satisfy this requirement?
	(ii) Required to remove all protective clothing at	Vinyl chloride has a very low boiling point	Since vinyl chloride has a low boiling point (-13.8C)

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	each exit from the regulated area;	and will readily vaporize, therefore, flow will sufficiently decontaminate any contaminated areas, making it unnecessary to remove all protective clothing at each exit from the regulated area.	(+7°F), clothing that has been contamined by one or a few drops of vinyl chloride liquid may be decontaminated by normal or induced evaporation.
5	and (iii) Required to shower after the last exit of the day.	Unnecessary - vinyl chloride vaporizes rapidly, therefore, a shower would not help to protect against exposure.	The objective of the proposed regulation is primarily to protect against excessive exposure to vinyl chloride. Since there would be no vinyl chloride present by the time an employee reached the shower room, a shower would serve no useful purpose. A shower may be desirable for personal hygiene reasons, but not for the regulation of exposure to vinyl chloride.
6	(3) Clean protective clothing shall be provided whenever contaminated or soiled, but not less frequently than weekly. Contaminated clothing shall be decontaminated before reuse by removal for laundering or disposal.	Laundering for the purpose of decontaminating clothing is unnecessary as vinyl chloride vaporize before laundering can be accomplished.	Physical characteristics of vinyl chloride are such that decontamination can be accomplished by natural evaporation.
7	(i) (3) Storage or consumption of food or beverages, storage or use of smoking	Unnecessarily restrictive.	The rapid rate of evaporation of vinyl chloride precludes any likely hood of exposure by ingestion

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or non-food chewing products, and the storage or application of cosmetics are prohibited in regulated areas.		or by skin absorption. Therefore, it seems unnecessarily restrictive to deny the use of such materials in areas where the atmosphere is normally below the allowable limit of vinyl chloride.

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