

ILLINOIS POLLUTION CONTROL BOARD
November 19, 1992

IN THE MATTER OF:)
TOXIC AIR CONTAMINANTS LIST,) R90-1(D)
STYRENE) (Rulemaking)
(35 ILL. ADM. CODE 232))

ORDER OF THE BOARD (by, J. C. Marlin):

On October 1, 1992 the Board issued an order asking for public comments regarding the possible listing or desisting of the chemical styrene on the Air Toxics Contaminants List. (35 Ill. Adm. Code 232.) Today, the Board is allowing a two week period in which any person may respond to the comments received.

The Board has received three comments on this matter. The comments received by the Board were from the Illinois Environmental Protection Agency (Agency) (PC. #68), the Styrene Information and Research Center (SIRC) (PC. #69), and the Sierra Club, along with the Coalition for Consumer Rights and the Chicago Lung Association (Sierra Club et al.) (PC. #70). The comments are summarized below.

The Agency in its comments urged the Board to proceed with the styrene listing and to initiate first notice publication of the proposed rule in the Illinois Register. The Agency asserts that styrene is a 2B carcinogen and should be a listed chemical. The Agency's comments explain that its determination is based at least in part on the International Agency for Research on Cancer's (IARC) determination that styrene is carcinogenic. The Agency goes on to say that it does not feel that the SIRC rebutted IARC's determination.

SIRC in its comments stated that its purpose was to reiterate its position which it felt had been made clear in previous comments. The August 24, 1990 comments SIRC specifically refers to were submitted to the Board as prefiled testimony and are labeled SIRC Exhibit #1 attachments A-G. The Board notes that it also has on file additional prefiled testimony and comments from SIRC. (SIRC Exh. #2-5 and PC. #29 and #54.)

SIRC stated in its most recent comments (PC. #68.) that it believes that it has submitted sufficient evidence to demonstrate that styrene is not a carcinogen. It is SIRC's position that the genotoxicity data about styrene does not provide a clear basis to conclude that styrene should be classified as a carcinogen. SIRC also comments that, based on a review of literature by an expert commissioned by SIRC, styrene is either non-mutagenic or very weakly mutagenic.

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Sierra Club et al. commented that it was their belief that the literature demonstrates the serious chronic toxicity effects of styrene exposure. Thus, they argue, regardless of styrene's carcinogenicity effects it should be listed because of its chronic toxicity. Sierra Club relied mainly on a scientific article describing immunotoxicological research with styrene, in formulating their argument. (Dogra, R.K.S., S. Khanna, S.N. Srivastava, L.J. Shukla and R. Shanker. 1989. Styrene-induced immunomodulation in mice. Int. J. Immunopharmac. 11(5):577-598.) However, the following other articles were also given as references:

Elovaara, E., H. Vainio and A. Aitio. 1990. Pulmonary toxicity of inhaled styrene in acetone-, phenobarbital- and 3- methylcholanthrene-treated rats. Arch Toxicol 64(5):365-9.

Geuskens, R.B.M., M.M. van der Klaauw, J. van der Tuin and J.J. van Hemm. 1992. Exposure to styrene and health complaints in the Dutch glass-reinforced plastics industry. Ann. Occup. Hyg. 36(1):47-57.

Kato, T., K. Higashi, and N. Inouye. 1989. Sub-chronic effects of styrene and styrene oxide on lipid peroxidation and the metabolism of glutathione in rat liver and brain. J. Toxicol Sci. 14(1):1-9.

Khanna, V.K., R. Husain, J.P. Hanig and P.K. Seth. 1991. Increased neurobehavioral toxicity of styrene in protein-malnourished rats. Neurotoxicol. Teratol. 13(2):153-9.

Letz, R., F.C. Mahoney, D.L. Hershman, S. Woskie and T.J. Smith. 1990. Neurobehavioral effects of acute styrene exposure in fiberglass boatbuilders. Neurotoxicology and Teratology. 12:665-668.

Schoenhuber, R. and M. Gentilini. 1989. Influence of occupational styrene exposure on memory and attention. Neurotoxicol Teratol. 11(6):585-6.

Siedel, H.J., J. Herkommer, D. Seitz, L. Weber, and E. Barthel. 1990. Haemopoietic stem cells in mice chronically exposed to styrene vapour. Arch Toxicol 64(6):466-9.

Shigeta, S., K. Miyake, H. Aikawa and T. Misawa. 1989. Effects of postnatal low-levels of exposure to styrene on behavior and development in rats. J. Toxicol Sci. 14(4):279-86.

Srivastava, J., P.K. Seth and S.P. Srivastava. 1992.
Effect of styrene on testicular enzymes of growing rat.
Indian J. Exp. Biol. 30(5):399-401.

Srivastava, S., P.K. Seth and S.P. Srivastava. 1989.
Effect of styrene administration on rat testies. Arch
Toxicol. 63(1):43-6.

Interested persons may file a response to the above listed comments to be received by the Board on or before December 3, 1992. The response period will be only for those wishing to respond to the above mentioned comments; no new comments will be accepted during this time.

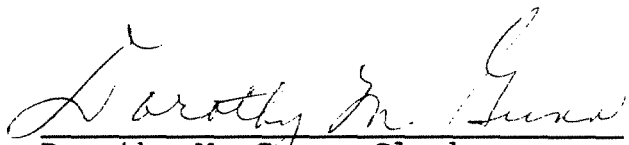
Following the close of the response period, the Hearing Officer anticipates that the Board will issue an Opinion and Order which will determine either:

- a) not to proceed with the listing of styrene and dismiss the docket, or
- b) to proceed with the styrene listing, and initiate first notice publication of a proposed rule in the Illinois Register (this, of course starts a new public comment period).

The Board does not envision extending the present response period beyond December 3, 1992 and encourages participants to timely file any comments they wish the Board to consider before the Board takes its next action in this docket.

IT IS SO ORDERED

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above order was adopted on the 19th day of November, 1992, by a vote of 7-0.


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board

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