Monsanto

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SUBJECT SENSITIVITY OF PVC MARKETS TO POLLUTION PROBLEMS

REFERENCE

TO : J. R. Darby
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CEN's September 28 article dealing with the above -- as a factor in the growth pf plasticizers for PVC -- is highly pertinent. It is a disturbing fact that Monsanto and other suppliers of PVC are beginning to loose business because of charges that PVC is not compatible with a better environment. The PVC industry can take no comfort from the fact that these charges are generally incorrect and without relevance to the whole environmental problem. These charges are made irresponsibly by many, including highly placed individuals in the Federal Bureau of Solid Waste Management. They are echoed by environmental zealots in all walks of life, ranging from the top-level housewives of Washington's Concern, Inc., to the uninformed and unthinking zealots of many college campuses. In addition, the so-called "technical" writers in the press and on radio and on TV are making much of these irresponsible charges. They fail utterly to inform the public as to the real facts. It is no wonder that the average consumer is developing a bias against PVC in particular and, increasingly, other plastics materials in general.

In the most familiar cases, the plastics are those involved in packaging. The reason for this, of course, is that such packaging materials are very evident to the average consumer, if unaware of the role of PVC and other plastics in building, construction, automotive interiors, appliances, etc.

The plastics industry as a whole has been slow to respond to this menace. The first reaction was SPI's in 1964 when it contracted with the Mellon Institute to summarize the literature then available and report this as "The Role of Plastics in Solid Waste." I served as monitor of this project for SPI. With few exceptions, the attitude within Monsanto was one of amused tolerance for this activity. There is a depressing commentary on the technical awareness of the present director of HEW's Bureau of Solid Waste Management when he says that this publication was responsible for alerting the Federal Government to PVC's problems. The information in the "Battelle Report" was gathered from the world-wide literature available at that time and reflecting experience accumulating as early as 1940!

Since the publication of the Battelle Report in 1966, SPI created its Plastics Waste Management Committee, of which I am current chairman. As a result of the growing activity of this committee, now comprising 300 industry members, the SPI's Board of Directors created its own "environmental subcommittee" to insure that the

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scope of the environmental problem will be seen as broader than the purely technical aspects. This subcommittee, which comprises top plastics executives from throughout the country, recognizes the management of waste plastics as its most critical challenge. To cope with this threat, this committee has raised $300,000 to finance necessary technical, legal and public relation costs of a broad program to present the facts and to overcome the frequently irrational and excessively emotional attack on plastics, now largely against PVC.

The most recent publication by SPI is its "Position Paper" entitled "The Plastics Industry and Solid Waste Management."

Much more will have to be done before the ultimate authority, that is, the American taxpayer, will understand the problem well enough to take intelligent action. It will have to understand that all materials we use in our society, for whatever purpose, have to be considered with reference to their benefits and their risks. Most important, it must be made clear that the risks are manageable, if we take advantage of available information.

Basically, we live on a space ship on which we can really hide no waste material for long. We must learn that all our resources are in a closed system. We must learn to recycle and rework all existing materials if man is to survive.

In this context, to single out PVC or plastics in general as a major problem is as idiotic as eliminating phosphate in detergents to cure water pollution. It is true that these materials can and do contribute to degrading our environment to small and so-far undefined degrees, but only because we have not taken the necessary steps to properly manage these materials, once used. To focus on PVC without considering the whole problem is suicidal, simply because an outright elimination of PVC would do essentially nothing to control the increasingly urgent problem of air pollution. What is needed is to recognize that we need a national commitment to devise total systems of material recycling and to recognize that we have barely made a start in this direction, even with the enactment of the Resource Recovery Act. PVC is attacked because it is alleged it creates corrosive hydrogen chloride when burned which pollutes the atmosphere. This is partially true but clearly totally without quantitative perspective or reference to available controls. We must recognize that PVC constitutes something less than 0.5% of our total solid wastes, of which no more than 12% is incinerated in this country. Of all the American incinerators, the Federal Bureau of Solid Waste Management estimates that three-quarters are ineffective in controlling air pollution. Thus, on the one hand, the PVC eliminated by burning is a minute part of all the wastes eliminated by burning, and an even more minute part of all air pollution, in an incinerator. On the other hand, the limited incineration we perform in this country is admittedly poor in quality because of public apathy and failure to understand that the elimination of all kinds of human wastes, including plastics, is a public problem which requires much more effort and investment.

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Data are now being obtained by SPI's "NYU Project" which may confirm informed estimates that even in ineffective incinerators the hydrogen chloride gas produced from burning PVC is roughly one-half of all the hydrogen chloride from all sources and roughly one-third the total corrosive gases of all kinds from all sources. The public needs to know that technology is ample to eliminate the deterioration of incinerators by corrosion of these gases. (This has been demonstrated for many years but certainly not in poorly designed or poorly operated incinerators) The public needs to know that of all the chlorides introduced into an incinerator roughly one-half is combined with the solid residue. The public needs to know that all of the remaining uncombined chlorides, principally hydrogen chloride, can be removed from the incinerator emission with existing know-how, thus eliminating any threat to air pollution. The public needs to know that technology is now available for reducing the amount of combustible waste to be incinerated, by separating out useful materials prior to separation. The public needs to know that those combustibles not separable in quality suitable for re-use can be and are now burned in incinerators to generate electric power, thus conserving energy. The public needs to know that technology is now available to separate the useful metals and glass in the non-combustible residue from incinerators, for recycling. The public needs to know that reclamation centers are now being designed and built in which economic combinations of separation for rework, generation of electric power, and gross reduction of volume of residue, to date of no useful value, are featured. These involve incineration without air pollution. In some cases these systems also are combined with re-use of other sewerage and animal and vegetable wastes for land reclamation.

In all of this, PVC is but one tiny aspect of the problem. PVC has become a scapegoat. Its consumer-oriented packaging market, and that of its ingredients, are taking their lumps. The real problem is to create public awareness of its responsibility to manage its total waste problem in the most economical fashion, taking into account our present and future environment and total supply of resources.

The plastics industry is not yet fully aware of its responsibilities in solving this problem in spite of leadership demonstrated in some quarters. Regardless, the plastics industry's leadership is equal to that shown by other material-oriented industries. Furthermore, some elements of industry, though frequently maligned by government, have in many cases, as with plastics, moved ahead of the Federal Government. Even so, present efforts by either industry or Federal Government are, in my opinion, inadequate, and likely to remain so until a true national commitment and strategy are made to waste management.

Khrushchev said the Soviet Union would bury us, economically, without firing a shot. I think he has a large chance of being proved correct, unless we manage our resources better, to offset the Soviet's increasingly advantageous position in nearly all raw materials.

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