The Society of the
Plastics Industry, Inc.

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Mr. Don R. Goodwin
Emission Standards & Engineering Division
Environmental Protection Agency
Research Triangle Park, North Carolina 27711

Dear Mr. Goodwin:

After reviewing the proposed EPA Vinyl Chloride Standard, members of SPI have raised an issue regarding the portion of the Proposed Standard relating to the Laboratory and Research and Development facilities.

In SPI's initial comments to EPA on the Proposed Standard for Vinyl Chloride we proposed that polymerization reactors of 500 gal, or less capacity be exempt from the standard. After reviewing current and complete industry data, the SPI now agrees with the EPA that 50 gal. is the appropriate cut-off point for exemption, based on examination of the data presented in Exhibits A and B; however, SPI respectfully requests that EPA reconsider its requirements for reactors between 50 and 1100 gallons capacity.

The difficulties created in meeting the current proposal by EPA, in paragraph 61.64 go beyond the fact that costs far outweigh the benefits derived. It is true that larger reactors tend to be installed near production facilities for convenience of monomer supply; however, please be advised that several are at research facilities. Other research reactors are at a sufficient distance from the production equipment that their interconnection is not feasible. Long runs of vacuum or slurry lines are not practical, especially in climates where sub-freezing conditions are experienced. Line plugging, burning of resin, and excessive pressure drops will make these lines inoperative. There are also problems with syncronization of remote operations and availability of equipment.

In the short time we have focused on this issue, we have had confirmation from Air Products, Conoco, Firestone, Goodrich, Tenneco and Union Carbide that they will experience some or all of the problems raised above.

Two of the major purposes for which pilot-scale equipment is used are development of improved products and processes, and the solution of plant production problems. In the first case, it is often impossible to obtain adequate scale-up data from a 50 gal. reactor. This is becoming more important as reactor size increases in modern plants. In the second case, it is necessary that equipment be available

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immediately to resolve production problems, and that the polymerizer be as similar to production equipment as possible.

Another problem arises when the research facilities are using differnet comonomers from those in use at the production plant, which is a frequent occurrence. Common use of a single recovery/abatement facility is not possible under these circumstances.

The spirit of the Proposed Standard calls for the use of the best available technology, to encourage innovations and to minimize potential losses by encouraging research and providing means for performing needed studies on the smallest practical scale. Any regulation that discourages the use of research equipment will limit innovation and improvement in the industry, and will lead to more developmental work being done in production equipment, where the potential for major releases is increased. We believe the present wording of the standard will inhibit use of research facilities, not only because of the cost of compliance, but because of restrictions on the flexibility of operations. For example, in several installations the interconnection of research and production equipment would take the operation of the research equipment out of the hands of trained engineers and put it under the jurisdiction of production labor because of the wording of union contracts. As another example, the rate and timing of the termination and recovery of unreacted monomer at the end of a batch can affect the properties of the product, and to depend on a product-oriented facility for this important service is not realistic.

We, therefore, request that 61.60(b) and (c) be amended to read as follows:

> (b) Research and development equipment of 50 gal. or smaller capacity shall be exempt from this subpart. Equipment larger than 50 gal. but no greater than 1100 gal, shall be exempt, except that total combined emissions from all sources shall be no more than 0.05 lb. vinyl chloride per lb. of vinyl chloride charged to the reactor. Each operator of such facilities shall submit a standard operating procedure to the agency for approval of its plan to meet this requirement.

The attached data in Exhibit B show that eight companies would reduce their emissions substantially in complying with the SPI proposal, while compaby G is already in compliance. The resulting total emissions would be about 68,000 lbs, per year, less than that emitted by reactors of 50 gal. or less, and less than 25% of current emissions. These 9 companies represent 45% of industry capacity, and include many of the major producers.

Finally, we want to address the cost-benefit issue raised by the proposed Research and Development Regulation. The Agency has declared it does not want to require a technology when it will create costs which are grossly disproportionate to the benefits derived. SPI believes the proposed Research and Development Regulation creates a problem which to date EPA has sought to avoid--namely grossly disproportionate costs for the removal of small amounts of monomer. For example the cost of compliance with

the SPI proposal has been estimated at about $90,000 for one research facility in excess of 50 gal., while compliance with the EPA proposal will be about $400,000 per facility. The cost of the SPI proposal is equivalent to $.42 per lb. versus $7.19 per lb, of VC removed if the EPA level of 10 PPM is adopted. At least two companies have confirmed the magnitude of these estimates, based on our yet incomplete survey. These are disproportionate costs for the removal of only 68,000 lb/yr of monomer of the entire country.

Based on the foregoing SPI contends that the proposed EPA VC Standard relating to laboratories and Research and Development facilities limits and restricts the flexibility of operation of these facilities while at the same time imposing disproportionate costs for the removal of so little monomer.

We thank you for the opportunity to present these views.

Very truly yours,

John R. Lawrence

John R. Lawrence
Technical Director