



September 23, 1985

TO: VINYL INSTITUTE MANUFACTURING PRACTICES COMMITTEE
RE: PROPOSED LETTER: GASHOLDERS

Since our last Committee meeting, there has been more pressure from the State of Delaware for polyvinyl chloride plants to install gasholder containment systems. W.C. Holbrook has "redrafted" the letter we discussed at the meeting, with the targeted recipient to be the Secretary of the Delaware Department of Natural Resources and Environmental Control. Because of the sensitivity of this issue and the fact that the letter has been redrafted, please review immediately and call me with your comments. I would like to see this letter go out on an expedited basis, but want to make sure that it represents a consensus. Thanks.

W.C. Holbrook

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Environmental Affairs

A Division of
THE SOCIETY OF THE PLASTICS INDUSTRY, INC
355 LEXINGTON AVENUE • NEW YORK, N.Y. 10017 • (212) 503-0654

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ADDRESSEE:

John E. Wilson III
Secretary, Department of
Natural Resources and Environmental Control
P.O. Box 1401
89 Kings Highway
Dover, DE 19901

Dear Mr. Wilson:

It has come to our attention that your Department is advocating the installation of gas containment systems to prevent emergency vinyl chloride releases from polyvinyl chloride plants. The Vinyl Institute and its member companies* are concerned with your Department's views on these systems.

We are aware that Formosa Plastics Corporation/ in its June 18 submission to the State of Delaware Department of Natural Resources and Environmental Control under the provisions of Consent Order 84C-DE-73 proposed a number of projects to prevent future emergency vinyl chloride releases -- one of the projects involves the installation of a vinyl chloride gas containment system. The Vinyl Institute is extremely concerned that such a system, which has always proven inadequate and impractical, will be construed by your Department as a real solution to the problem of prevention of vinyl chloride releases and in particular, emergency discharges from polyvinyl chloride reactors. We are writing you to state the Vinyl Institute's position on these systems and to suggest a better and more realistic way of preventing emergency vinyl chloride releases from polyvinyl chloride plants.

The Vinyl Institute is a Division of The Society of the Plastics Industry, Inc. Vinyl Institute members include: Air Products and Chemicals, The BFGoodrich Chemical Group; Borden Chemical, CertainTeed, Dow Chemical U.S.A., Georgia Gulf, Occidental Chemical, PPG Industries, Shell Chemical Co., Tenneco Polymers, and Vista Chemical.

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Containment systems, or so-called gasholders, have been scrutinized over the past ten years by industry and by the U.S. Environmental Protection Agency for possible use in preventing releases of vinyl chloride to the atmosphere. Essentially everyone in the industry has concluded that gasholders will not along, reliably prevent releases and that they are inherently unsafe because most emergency releases contain both solid polyvinyl chloride and gaseous vinyl chloride. We fear that the vent lines leading to gasholders could plug with solid polyvinyl chloride thus resulting in a catastrophic release or explosion. EPA's contractor, Radian Corporation, has similar concerns regarding gasholders and so stated in their report "Assessment of Control Technology for Reduction of Vinyl Chloride Monomer Emissions at Polyvinyl Chloride Plants", Jan. 1981 (EPA 68-01-4136, Task 27). However, gasholder systems designed with appropriate safety precautions can be helpful in preventing emergency vinyl chloride releases.

Many emergency vinyl chloride releases have occurred from polyvinyl chloride reactors when reaction conditions became out of control thus resulting in overpressurization. The best method of preventing releases from polyvinyl chloride reactors, in our opinion, is to install a system to control overpressure by very rapid batch deactivation (colloquially known as "shortstopping"). Shortstop systems exist that can stop a reaction, and thus prevent a release under adverse conditions such as power loss, cooling water failure, or loss of mixing in the reactor. Many plants throughout our industry utilize a combination of shortstop systems and safety designed gasholder systems to help prevent emergency vinyl chloride releases. We believe a good system of this type would be more effective and safe in preventing emergency vinyl chloride releases from reactors.

We want you to know that the Vinyl Institute believes that containment systems alone are not an adequate way to deal with emergency vinyl chloride emissions. Each polyvinyl chloride plant must be reviewed on a case-by-case basis to define the most appropriate system or combination of systems for preventing emergency

vinyl chloride releases. We believe this, along with sound training and maintenance programs, provide the safest and most effective means for eliminating vinyl chloride releases.

Very truly yours,

Roy T. Gottesman

cc: Carper
Mack
Region III EPA
Formosa (Robert Boyer)

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