



A Division of The Society of The Plastics Industry, Inc.

COMMENTS ON THE EPA HAZARDOUS ORGANIC NESHAP (HON) PROJECT

The Vinyl Institute, a division of The Society of the Plastics Industry, Inc.^{1/} is pleased to provide these comments to the National Air Pollution Control Techniques Advisory Committee (NAPCTAC) on the U.S. Environmental Protection Agency's (EPA) project to regulate the Synthetic Organic Chemical Manufacturing Industry ("SOCMI") under the National Emission Standards for Hazardous Air Pollutants ("NESHAP") for Hazardous Organics, otherwise known as the HON program.

Members of the Vinyl Institute represent the majority of domestic manufacturers of vinyl chloride, polyvinyl

^{1/} SPI is a 2,000 member not-for-profit trade organization representation all segments of the plastics industry in the United States. The Society's members include processors and manufacturers of plastics and plastic products, suppliers of raw material, processors and converters of plastic resins and manufacturers of accessory equipment for the plastic industry. Founded in 1937, SPI is the major national trade association of the plastics industry.

Members of the Vinyl Institute include the BF Goodrich Company, Borden Chemicals and Plastics Industries, CertainTeed Corporation, The Dow Chemical Company, Georgia Gulf Corporation, Occidental Chemical Corporation, PPG Industries, Inc., PW Resins, Shintech, Inc., and Vista Chemical. Members of the Vinyl Institute account for approximately 82% of the domestic production of vinyl chloride and 63% of the domestic production of polyvinyl chlorid .

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chloride, and ethylene dichloride. Because these substances are listed under newly amended section 112 of the Clean Air Act, and because many Vinyl Institute members fall within the SOCMI point source category, the developing HON regulations are of significant concern. EPA must carefully consider the interrelationship between specific standards for individual substances such as vinyl chloride and general standards such as those presented in the HON and equipment leaks proceedings.

A. REGULATORY CONTEXT

The Clean Air Act Amendments of 1990 direct EPA to establish source categories and subcategories for facilities emitting any of the listed hazardous air pollutants specified in Section 112(b). EPA must then promulgate regulations specifying maximum achievable control technology (MACT) for such categories and subcategories. The initial regulations will be subsequently followed by a residual risk analysis.

The current EPA proposal would establish broad MACT requirements for five emission sources -- process vents, wastewater treatment operations, storage tanks, transfer operations and equipment leaks. Equipment leaks are, however, addressed in a separate regulatory proceeding. EPA is to evaluate possible control technologies in light of specific source categories, emission levels, production rates or

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capacities, chemical properties, or physical characteristics and based on its evaluation determine the appropriateness of mandating a particular control technology as MACT.

The list of hazardous air pollutants specified in Section 112(b) of the Clean Air Act includes chemicals for which EPA has already promulgated NESHAP regulations. For example, a NESHAP has been established for vinyl chloride which applies to vinyl chloride emissions from ethylene dichloride (EDC), vinyl chloride and polyvinyl chloride (PVC) manufacture. 40 C.F.R. § 61.60 (1989).

Vinyl chloride is one of only seven pollutants that were regulated under former Section 112 prior to the 1990 amendments. The rule was initially promulgated in 1976 and underwent extensive review leading to minor revisions in 1986. The rule was most recently amended in 1990. 41 Fed. Reg. 46561 (Oct. 21, 1976); 51 Fed. Reg. 34904 (Sept. 30, 1986); 55 Fed. Reg. 28346 (July 10, 1990). As part of the 1986 revisions, EPA reviewed available control technology. At that time, EPA concluded that there was no preferable process or control technology superior to that mandated by the standard. 50 Fed. Reg. 1182, 1183-1186 (Jan. 9, 1985).

The members of the Vinyl Institute are concerned about potential redundancy or conflict arising between a generally

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applicable HON regulation and the existing vinyl chloride NESHAP. Concerns in this regard may be more clearly stated after reviewing the situation that might exist with regard to specific emission source types.

B. HON PROPOSAL AND THE VINYL CHLORIDE NESHAP

1. PROCESS VENTS

The control technology used as the basis for MACT determination for process vents would be a 98% control level achieved, for halogenated streams, by using a thermal incinerator plus acid gas scrubbing.^{2/}

In PVC plants, under the existing vinyl chloride standard, vinyl chloride emissions from resin driers are

^{2/} The overview of the EPA HON project is quite general. For example, in assessing emission reductions of 95% or 98%, we assume that the Agency is referring to a 98% reduction from uncontrolled emissions. We believe that a 95% or 98% reduction of existing emissions is clearly infeasible.

There are other characteristics of the EPA proposal that warrant clarification. For example, we assume, but it is not stated, that the percentage reduction figures address routine emissions. Episodal or emergency releases should not be part of this particular target figure, and EPA should state so explicitly. Similarly, some States will include fugitive emissions from piping and related equipment in a storage area as part of the storage equipment release figures. Under the EPA plan, such emissions are properly handled as equipment leaks, not as storage tank emissions. This should also be made explicit.

controlled by stripping vinyl chloride from the PVC resin before drying. This provision was incorporated into the existing vinyl chloride NESHAP due to (1) the technical and economic infeasibility of controlling vinyl chloride emissions from the large-air volume, high-moisture, low vinyl chloride-containing drier exhaust stream and (2) the emissions of other pollutants associated with combustion.^{3/} Since the vinyl chloride NESHAP was first promulgated 17 years ago, the PVC industry's utilized and perfected resin stripping technology. This has resulted in reduction of vinyl chloride emissions far below the levels contemplated when the original rule was developed.

A similar situation exists with PVC reactor opening emissions. The existing vinyl chloride emissions limit was based on the use of a reactor steam sweep and/or clean reactor technology. These technologies reduce the potential for vinyl chloride emissions before opening the reactor to the atmosphere. 40 C.F.R. § 61.64(a). This technology has advanced over the years to the point where actual emissions today are significantly less than those contemplated by the original NESHAP regulations.

^{3/} For example, increased NO_x, CO, CO₂ levels and energy consumption requirements associated with additional incineration.

PVC plants utilize combustion technology and/or absorber/stripper technology to control all in-process vents to the 10 parts per million (ppm) level specified in the existing vinyl chloride NESHAP. 40 C.F.R. § 61.64(b). The HON currently being considered by EPA could be interpreted to prohibit the use of absorber/stripper technology. This would result in unproductive expenditures for the PVC industry because vinyl chloride emissions are very effectively controlled through the use of an absorber/stripper technology. In addition, use of absorber/stripper technology results in the recovery and reuse of vinyl chloride and does not produce combustion related emissions.

Resin stripping and reactor steam sweeping might be characterized as a process modification rather than end-of-the-stack or end-of-the-pipe control. As such, it is consistent with EPA's new focus on process modification in lieu of end-of-the-stack controls. Further, EPA should, whenever possible, promulgate standards that require certain emission reduction performance rather than specifying the use of particular control technologies. Thus, in-process controls, such as slurry stripping and reactor purging, should be considered MACT, instead of requiring add-on incineration or similar control devices.

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2. WASTEWATER TREATMENT OPERATIONS

The vinyl chloride NESHAP currently requires that inprocess wastewater be stripped to 10 ppm or less for vinyl chloride. 40 C.F.R. § 61.65(b)(9). This is comparable to the benzene wastewater NESHAP in which the HON is based on wastewater treatment. Therefore, the existing vinyl chloride standard meets control technology candidates that EPA has identified as a basis for establishing MACT criteria.

3. STORAGE

The EPA proposal would require approximately 95% pollutant control, with the exact level of control depending on individual chemical properties. The vinyl chloride industry exceeds the 95% control criteria, since vinyl chloride is stored in unvented pressurized tanks. Indeed, except for emergency relief discharges, the vinyl chloride standard states that "there is to be no discharge to the atmosphere from any relief valve on any equipment in vinyl chloride service." 40 C.F.R. § 61.65(a); see also § 61.65(b)(5) (similar limitation on manual venting).^{4/}

4/ "'In vinyl chloride service' means that a piece of equipment either contains or contacts a liquid that is at least 10 percent vinyl chloride by weight or a gas that is at least 10 percent by volume vinyl chloride" 40 C.F.R. § 61.61(1).

4. TRANSFER OPERATIONS

Under the EPA proposal, the Agency envisions a 90% reduction in hazardous air pollutant emissions resulting from transfer operations following the same guidelines that would apply to process vents. The current vinyl chloride standard already addresses this situation. 40 C.F.R. § 61.65(b)(1). Emissions from any loading or unloading lines in vinyl chloride service are to be minimized by purging the lines and venting any removed vinyl chloride through a control system whose exhaust gas does not exceed 10 ppm vinyl chloride.

5. EQUIPMENT LEAKS

Equipment leaks would be addressed by EPA through the Regulatory Negotiation process. In any event, we note that equipment leaks (fugitive emissions) are addressed extensively under the vinyl chloride NESHAP. 40 C.F.R. § 61.65(b). We certainly understand the Agency's desire to apply the equipment leak provisions developed in the Regulatory Negotiation process to facilities not covered by the vinyl chloride NESHAP. Under this strategy, however, either the vinyl chloride NESHAP or the Regulatory Negotiation provisions could apply, not both. The overlap or redundancy created by applying both sets of requirements would be unnecessary, confusing and counterproductive.

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C. COORDINATING GENERIC AND SPECIFIC STANDARDS

The Vinyl Institute requests that EPA carefully consider the requirements of the existing vinyl chloride NESHAP and the technologies currently employed and developed by the vinyl industry in evaluating appropriate MACT control. EPA should allow equivalent control technologies to avoid redundancy and duplicity of generic MACT requirements with existing vinyl chloride NESHAP requirement.

MACT is defined under Section 112(d)(3) for existing standards as controls equivalent to the average of those presently employed at the most tightly controlled existing facilities.^{5/} Under this approach, the average emission

5/ MACT is broadly defined in Section 112(d)(3) as follows:

The maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator. Emission standards promulgated under this subsection for existing sources in a category or subcategory may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than --

(A) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information), excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate

(continued...)

limitation of the best 12% of existing sources or the best performing 5 sources, depending on industry size, will indicate that the vinyl chloride NESHAP-mandated technology is MACT. For example, the vinyl industry is not aware of any plans that control downstream emissions from resin other than through stripping before the drier.

Part of EPA's policy in implementing the Clean Air Act Amendments of 1990 is referred to as E³. By this, the Agency means that it will achieve and maintain a healthy environment while supporting strong and sustainable economic growth and sound energy policy.^{5/} The use of process modifications to achieve emission reductions, instead of end of the stack incineration, is consistent with EPA's energy conservation and "cleanest, technologically feasible manner" policy.^{7/}

5/ (...continued)

or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined by section 171) applicable to the source category and prevailing at the time, in the category or subcategory for categories and subcategories with 30 or more sources, or

(B) the average emission limitation achieved by the best performing 5 sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategories with fewer than 30 sources.

6/ See EPA Office of Air and Radiation, Implementation Strategy for the Clean Air Act Amendments of 1990, at 7 and Figure 1 (Jan. 15, 1991).

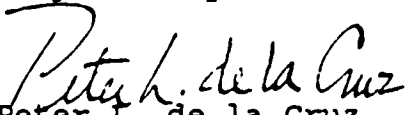
7/ Id. at 7.

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Moreover, the policy explicitly encourages market-based principles and other innovative approaches, such as "performance-based standards."^{8/}

The Vinyl Institute endorses this approach. The existing process and emission performance standards contained in the current vinyl chloride NESHAP standard are consistent with this policy. The Vinyl Institute would be happy to provide additional detail to the Committee or EPA.

Respectfully submitted,


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January 30, 1991

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^{8/} Id. at 7.