



November 28, 1989

TO: The VI Health, Safety & Environment Committee

The enclosed copy of the comments filed on the proposed amendments to the National Emission Standard for vinyl chloride is for your files.

Meredith
Meredith N. Scheck
Assistant Director

MNS/pmb

CTL018119

The Society of the
Plastics Industry, Inc.



1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

Central Docket Section (LE-131)
Attn: Docket No. A-81-21
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Re: Proposed Amendments to the National Emission
Standard for Vinyl Chloride

Dear Sir:

The Vinyl Institute, a division of the Society of the Plastics Industry (SPI)^{1/} is pleased to submit comments on proposed revisions to the national emission standard for vinyl chloride, 40 C.F.R. § 61.60 et seq., published at 54 Fed. Reg. 38938 (Sept. 21, 1989).

On September 30, 1986, the Environmental Protection Agency (EPA) published a final rule revising the national emission standard for vinyl chloride ("the vinyl chloride standard") under section 112 of the Clean Air Act, 42 U.S.C. § 7412. 51 Fed. Reg. 34,904-34,915 ("the 1986 Amendments"). We concurrently filed with the EPA and the U.S. Court of

^{1/} SPI is a 2,000 member not-for-profit trade organization representing 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 materials, processors and converters of plastic resins and manufacturers of accessory equipment for the plastics industry. Founded in 1937, SPI is the major national trade association of the plastics industry.

Members of the Vinyl Institute include Air Products & Chemicals, the BFGoodrich Company, Borden Chemicals and Plastics Industries, CertainTeed Corporation, The Dow Chemical Company, Georgia Gulf Corporation, Occidental Chemical Corporation, PPG Industries, Inc., 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 chloride.

CTL018121

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

Appeals for the District of Columbia Circuit a petition for stay of enforcement and administrative reconsideration of seven provisions of the 1986 Amendment. Specifically, we requested review of: (1) the definitions of "ethylene dichloride purification," "leak," "exhaust gas," "relief valve discharge," and "3-hour period," (2) the scope of the relief valve discharge provisions; and (3) the leak detection and elimination provisions. After careful examination of our petition for review of the 1986 Amendments, EPA has published this proposed rule containing revisions to the 1986 Amendments.

The SPI supports these proposed revised provisions which simply clarify the national emission standards for vinyl chloride. In these comments, we will present information in support of the proposed revisions to the 1986 Amendments.

A. COMMENTS ON THE PROPOSED REVISED PROVISIONS
Section 61.61(o)-Definition of EDC Purification.

SPI supports the proposed revision to the definition of "ethylene dichloride purification" which excludes crude, intermediate, and final ethylene dichloride storage from the purification process. 54 Fed. Reg. 38942; proposed § 61.61(o) (Sept. 21, 1989). EPA states in the preamble to the proposed rule that it intended, in the 1986 Amendment, to exempt crude and intermediate storage tanks, along with final storage tanks, from the exhaust gas standard. 54 Fed. Reg. 38940 (Sept. 21, 1989). The proposed definitional revision thus rectifies a drafting oversight in the 1986 Amendments.

As stated in EPA's Background Information Document (BID), the Agency concluded, prior to the 1986 Amendments, that regulation of EDC intermediate and final storage tanks under the vinyl chloride standard was not warranted. BID, pp.2-43 through 2-45. EPA reached this conclusion because the cost effectiveness ratios, shown on page 2-44 of the BID, exceed EPA's own reasonableness criteria for control of extremely low quantities of vinyl chloride emissions. 54 Fed. Reg. 38940 (Sept. 21, 1989).

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

In response to the SPI's petition for reconsideration, EPA evaluated the data submitted by one SPI company (Docket Entry No. VI-B-4) for nine crude and intermediate EDC storage tanks before the final finishing column at one of its facilities. These tanks are currently uncontrolled. The data included tank sizes, design, emissions estimates, and costs. The company's estimates of the total uncontrolled emissions (0.002 to 0.323 Mg/yr vinyl chloride) for the nine crude and intermediate tanks fall at the low end of the range of individual vinyl chloride tank emission estimates made by EPA for ethylene dichloride final product storage tanks. This information is consistent with EPA's position that the regulation of crude and intermediate storage tanks is unnecessary because emissions are extremely low. 54 Fed. Reg. 38940 (Sept. 21, 1989).

**Section 61.61(w) - Definition of Leak, and Related Section
61.242-2 - Standards: Pumps**

SPI objected to EPA's defining "indications of liquid dripping" as a "leak" in the 1986 Amendments. 51 Fed. Reg. 34905 (Sept. 30, 1986). Since dripping liquids may not always contain vinyl chloride, we requested that the phrase be deleted or revised to refer to vinyl chloride. Although "indications of liquid dripping" appears in the definition of leak in the proposed revisions, we no longer oppose inclusion of the phrase because EPA has proposed to revise the standard for pumps, Section 61.242-2(d), to take into account the fact that some non-vinyl chloride fluid leakage is normal. 54 Fed. Reg. 38942; proposed § 61.61(w) and 38939-38940 (Sept. 21, 1989).

Proposed Section 61.242-2(d)(4) addresses drips from pump seals that contain vinyl chloride, and proposed Section 61.242-2(d)(6) addresses drips from pump seals that do not contain vinyl chloride. 54 Fed. Reg. 38943; proposed rule § 61.242-2 (Sept. 21, 1989). The proposed revised provisions of Section 61.242-2(d) are designed to accomplish two purposes. One is to ensure that vinyl chloride leaks from pump seals are detected and eliminated. This is accomplished by paragraphs (d)(4)(i), (ii), and (iii). The other purpose is to identify and prevent pump seal failures by causing abnormal dripping

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

4

(even when vinyl chloride is not contained in the dripping liquid) to be detected and repairs to be made. This is accomplished by paragraphs (d)(6)(i), (ii), (iii), and (iv). These paragraphs require the facility owner/operator to establish criteria associated with normal operations. 54 Fed. Reg. 38940 (Sept. 21, 1989).

The intent of the proposed revised Section 61.242-2(d) is identical to the existing provisions. The difference is that the proposed Section 61.242-2(d)(6)(i) allows an owner/operator to take into account the small number of liquid drips that may occur when new seals are in place or are otherwise associated with normal operation. 54 Fed. Reg. 38940 (Sept. 21, 1989).

The proposed revisions would change the definition of "leak" to account for the proposed revisions to Section 61.242-2(d). Leak would include, in the case of pump seals regulated under Section 61.242-2, indications of liquid dripping constituting a leak under Section 61.242-2. 54 Fed. Reg. 38942 (Sept. 21, 1989). Under Section 61.242-2(d)(6)(i), the small number of liquid drips that may occur when new seals are in place or are otherwise associated with normal operation are not considered "leaks". Thus, although "liquid dripping" still appears in the definition of "leak", the reference to Section 61.242-2 limits the phrase so that the small number of drips associated with normal operations are not defined as leaks. 54 Fed. Reg. 38940 (Sept. 21, 1989).

This proposed revision to the phrase "indications of liquid dripping" as an example of a "leak" is proper because some non-vinyl chloride liquid dripping from pump seals is not indicative of seal wear. Some amount of barrier fluid leakage from the seal is normal. 54 Fed. Reg. 38940 (Sept. 21, 1989). Furthermore, if piping or equipment become cold due to the nature of the vinyl chloride production process, condensation forming on the outside of equipment may be "liquid dripping". The same could be said for water remaining after equipment is cleaned or washed down.

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

Section 61.61 (x) - Definition of Exhaust Gas

SPI supports EPA's proposed revision to the definition of "exhaust gas" which provides that a leak is not an exhaust gas. 54 Fed. Reg. 38942; proposed § 61.61(x) (Sept. 21, 1989). A review of the regulatory history of the definition of "exhaust gas" will clarify the need for this proposed revision.

Under the 1976 Standard, exhaust gases had to be routed to a control device which limits the amount of vinyl chloride discharged to 10 parts per million (ppm). In contrast, there was no specific concentration limitation for leaks. There can be none. Rather, leaks were controlled through leak detection and elimination plans developed for each individual plant. In United States v. Conoco, Inc., Civ. Action No. 83-2518 (W.D.La. June 1, 1984), the court reviewed the regulatory history and concluded that leaks are not exhaust gases and, therefore, are not subject to the 10 ppm emission limitation.

The 1976 Standard contained no definition of exhaust gas. In the 1985 Proposal, EPA proposed a definition for exhaust gas that was consistent with the Conoco decision and specifically stated: "A leak . . . is not an exhaust gas." 50 Fed. Reg. 1,194; proposed § 61.61(x). However, without adequate explanation or comment requesting such change, the definition for exhaust gas promulgated in the 1986 Amendments deleted this key sentence. 51 Fed. Reg. 34909 (Sept. 30, 1986).

Based on the 1986 Amendment, EPA could argue that emissions from leaks are exhaust gases. Contrary to the regulatory history underlying the vinyl chloride standard and the Conoco decision, EPA under the 1986 Amendments, might mistakenly subject companies to a potential fine of \$25,000 per day for each leak exceeding the 10 ppm emission limitation for exhaust gases notwithstanding compliance with the leak detection and elimination requirements in 40 C.F.R. § 61.65(b)(8).

SPI supports EPA's proposed revision to the definition of "exhaust gas" which provides that a leak is not an exhaust gas. 54 Fed. Reg. 38942; proposed § 61.61(x). This revision



1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

is supported by the regulatory history underlying the vinyl chloride standard and the Conoco decision. Furthermore, when this critical phrase was deleted from the 1986 Amendments, it amounted to a change in regulatory standards without notice or opportunity to comment as required by Section 307(d) of the Clean Air Act, 42 U.S.C. § 7607(d).

SPI also supports the proposed revision to the definition of "exhaust gas" which would require that equipment containing exhaust gas must comply with Section 61.65(b)(8) requiring leak detection and prevention, whether or not that equipment contains 10% by volume vinyl chloride. 54 Fed. Reg. 38942; proposed § 61.61(x). This proposed addition assures that leaks from exhaust gas streams are subject to the leak detection and elimination requirements, but that such leaks will not also be classified as "exhaust gas." 54 Fed. Reg. 38939 (Sept. 21, 1989).

Section 61.61(y) - Definition of Relief Valve Discharge

SPI supports EPA's proposed revision to the definition of "relief valve discharge". Pursuant to the revision, the term would simply refer to any non-leak discharge through a relief valve. 54 Fed. Reg. 38942; proposed § 61.61(y). A review of the regulatory history of the definition of "relief valve discharge" will clarify the need for this proposed revision.

No definition of "relief valve discharge" existed in the 1976 Standard. EPA's 1985 Proposal defined "relief valve discharge" to mean "any non-leak discharge through a relief valve." 50 Fed. Reg. 1194 (Jan. 9, 1985). Without explanation or support in the record EPA added the following language to this definition in the 1986 Amendments, 51 Fed. Reg. 34909 (Sept. 30, 1986):

"Relief valve discharge" does not include discharges ducted to a control system from which the concentration of vinyl chloride and exhaust gases does not exceed 10 ppm

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

7

(average for 3-hour period), or
equivalent as provided in § 61.66.

In SPI's request for a stay and reconsideration of certain provisions of the 1986 Amendments, we objected to the addition of this sentence.

Under the 1986 Amendments, a relief valve discharge would be exempt from regulation if vented to a control device, but only if the control device meets the 10 ppm emission limit. This pointed out that a double violation could occur (i.e., of the relief valve discharge and exhaust gas standards) if a relief valve discharge were vented to a control device not meeting 10 ppm. If interpreted to impose double penalties, this provision, in SPI's view, would exceed EPA's statutory authority and unlawfully increase the maximum statutory penalty set by Congress for a single event that leads to a violation of a NESHAP. Furthermore, the addition of the aforementioned language to the definition of "relief valve discharge" in the 1986 Amendments amounted to a change in regulatory standards without notice or opportunity to comment as required by Section 307(d) of the Clean Air Act, 42 U.S.C. § 7607(d). Finally, the definition of "relief valve discharge" in the 1986 Amendments contradicts past regulatory interpretation that relief valve discharges ducted to flares or other control devices are exempt from the exhaust gas standard. 54 Fed. Reg. 38939 (Sept. 21, 1989). For these reasons, the proposed revision to the definition of "relief valve discharge" is necessary.

S ction 61.61(z) - Definition of 3-hour Period

SPI supports EPA's proposal to revise the definition of "3-hour period" to ensure that a single event of 1 hour or less at 10 ppm or greater could result in no more than a single violation of the exhaust gas standard. A phrase has been added to the definition in 61.61(z) to accomplish this. 54 Fed. Reg. 38942; proposed § 61.61(z) (September 21, 1989).

In its request for a stay and reconsideration of certain provisions of the 1986 Amendments, SPI noted that in the September 1986 final rule EPA added a definition of "3-hour

1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

period" to clarify that the emission limits in the exhaust gas standard (10 ppm) is a 3-hour average. 51 Fed. Reg. 34909, final § 61.61.(z). The definition creates "rolling" averages (24 3-hour averages per day) rather than "block" averages (8 3-hour averages). We objected that a single, 1-hour 10 ppm exceedance could result in three violations of the 10 ppm exhaust gas standard under the revised definition of "3-hour period." This could lead to double or triple penalties, thereby exceeding the maximum penalty permissible under the Clean Air Act.

In the preamble to the proposed rule EPA states that it did not intend to penalize a plant three times whenever a 10 ppm event occurs within 1 hour. Rather, EPA wanted to ensure that a combination of two or more 10 ppm events which would result in a 3-hour exceedance do not go unpenalized just because they occurred over two separate 3-hour "blocks." The proposed revised definition of "3-hour period" satisfies EPA's intent without unintentionally subjecting a plant owner/operator to multiple violations. 54 Fed. Reg. 38940 (Sept. 21, 1989).

Section 61.65 - Regulatory Scheme for Relief Valve Discharges

SPI was concerned that the definition of "relief valve discharge" in the 1986 Amendment might be employed by EPA to vitiate the requirement in 40 C.F.R. § 61.65(a) that only relief valve discharges "to the atmosphere" may violate that regulation. The definition of "relief valve discharge" in the 1986 Amendments, 51 Fed. Reg. 34909 (Sept. 30, 1986) states that a relief valve discharge would be exempt from the requirements of Section 61.65(a) if vented to a control device, but only if the control device meets the 10 ppm emission limit. Consequently, this definition indicates that the relief valve discharge standard could be violated when a discharge is routed to a control device as well as when the discharge is released directly to the atmosphere.

To rectify this problem EPA proposed a revised definition of "relief valve discharge" in § 61.61(y), discussed previously. To further clarify that a relief valve discharge



1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

routed to a properly designed and operated control device is exempt from the provisions of the relief valve discharge standard, EPA has proposed revisions to Sections 61.65(a) and (d). 54 Fed. Reg. 38939 and 38942-38943; proposed § 61.65 (September 21, 1989).

Under proposed Section 61.65(a), the relief valve discharge standard applies to discharges, except for emergency relief discharges and except as provided in proposed Section 61.65(d), which is a new provision regulating relief valve discharges that are directed to a control device that is continually operating while emissions from the release are present at the device. The impact of § 61.65(a) and (d) is that relief valve discharges routed to control devices are subject to the requirements of Section 61.65(d) rather than the relief valve discharge standard.

EPA agrees that venting a relief valve discharge to a combustion device achieves significant emission reduction benefits. These devices, when properly designed and operated, generally have efficiencies of 98 percent or greater. Furthermore, the use of combustion devices are not expected to increase the number of relief valve discharges. Thus, because regulated facilities do have some economic incentive to ensure that relief valve discharges are minimized, the net relief valve discharge emission reduction resulting from the use of combustion devices should approach 98 percent or more. 54 Fed. Reg. 38939 (Sept. 21, 1989.) These facts support EPA's proposed revisions to Sections 61.65(a) and (d), which make clear that relief valve discharges are not subject to the relief valve discharge standards in Section 61.65(a) to the extent they are routed to a control device and regulated under Section 61.65(d).

S ction 61.65(b)(6) - Opening of Equipment

EPA has proposed a revision to Section 61.65(b)(6), which SPI supports, to reflect the proposed revision to the definition of "ethylene dichloride purification" in Section 61.61(o) which excludes crude and intermediate, as well as final ethylene dichloride storage tanks, and thus exempts such



1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

10

storage from the exhaust gas standard. The proposed revision to Section 61.65(b)(5), which establishes requirements for controlling the escape of vinyl chloride emissions from opened equipment, would exclude crude, intermediate and final ethylene dichloride storage tanks from the emissions requirements of this section based on the data previously reviewed, which confirms that extremely low quantities of vinyl chloride are emitted from such storage tanks. 54 Fed. Reg. 38943; proposed § 61.61(b)(6) and 38940 (Sept. 21, 1989).

S ction 61.68 - Emission Monitoring

In addition to the changes made in response to SPI's petition for reconsideration, EPA has proposed a minor clarification to Section 61.68 - emission monitoring. At present, Section 61.68(b) describes the vinyl chloride monitoring system used to meet the continuous monitoring requirements of § 61.68(a) as a device which obtains air samples on a continuous sequential basis and analyzes them. It is obvious that § 61.68(a) calls for the monitoring of the emissions from prescribed sources for vinyl chloride and not ambient air sampling as required under § 61.65(b)(8) for leak detection/elimination. Therefore, EPA is proposing that § 61.68(b) be clarified to require that representative (not air) samples from one or more applicable emission points be obtained and analyzed. 54 Fed. Reg. 38943; proposed § 61.68 and 38941-38942 (Sept. 21, 1989). SPI has no objection to this proposed revision which more accurately reflects the intent of Section 61.68(b).

B. Comments Concerning the "Vinyl Chloride" Decision

EPA notes that the proposed rule is not intended to address the decision of the United States Court of Appeals for the District of Columbia Circuit on the vinyl chloride standard, Natural Resources Defense Council, Inc. v. EPA, 824 F.2d 1146 (1987) (the "Vinyl Chloride" decision). EPA indicates that it will respond to the court's decision in a future notice. 54 Fed. Reg. 38938 (Sept. 21, 1989).

CTL018130



1275 K Street, N.W., Suite 400
Washington, D.C. 20005
(202) 371-5200
FAX 371-1022

11

The "Vinyl Chloride" decision requires that EPA, when setting national emission standards for hazardous air pollutants (NESHAP) under section 112 of the Clean Air Act, 42 U.S.C. § 7412, exercise its judgement in two steps. First, the Agency must determine a "safe" or "acceptable" level of risk considering only health factors. Second, EPA must set a standard that provides an "ample margin of safety." During this second step, economic and technological feasibility and other relevant factors may be considered.

The SPI supports EPA's decision to handle, in a separate rulemaking, any additional revisions to the emission standard for vinyl chloride that might be required by the "Vinyl Chloride" decision. The present proposal simply clarifies the operational standards for vinyl chloride, ethylene dichloride, and polyvinyl chloride plants. It does not alter the emission standards for vinyl chloride. Consequently, this proposed rule is not inconsistent with the "Vinyl Chloride" decision.

Sincerely,

A handwritten signature in cursive script, reading 'Roy T. Gottesman', followed by a diagonal line and the initials 'JSI'.

Roy T. Gottesman
Executive Director
Vinyl Institute
(201) 890-9299

OF COUNSEL

Jerry H. Heckman
Peter L. de la Cruz
Jeffrey S. Lang
Keller and Heckman
1150 17th Street, N.W.
Suite 1000
Washington, D.C. 20036
(202) 956-5600

CTL018131