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In Re:

National Emission Standard for Vinyl Chloride

Petition for Reconsideration of the Withdrawal of the June 1977 Proposed Amendments

and

Comments on the January 1985 Proposed Amendments

50 Fed. Reg. 1182 (Jan. 9, 1985)

Prepared on behalf of

Natural Resources Defense Council
and
Environmental Defense Fund

by

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March 25, 1985

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On January 9, 1985, the Environmental Protection Agency (EPA) published a notice of proposed revisions to the 1976 national emission standard for the hazardous air pollutant vinyl chloride. Included in the notice was the withdrawal of amendments to strengthen the standard, proposed in 1977 pursuant to the settlement agreement in Environmental Defense Fund v. Train.[1] The Natural Resources Defense Council (NRDC) and the Environmental Defense Fund (EDF) strenuously object to the withdrawal and hereby petition for reconsideration of it.[2]

The notice also announces proposed revisions principally concerning requirements for relief valve discharges, as well as certain other matters. NRDC and EDF submit that these revisions substantially weaken the current standard, and we hereby file comments in opposition to them.

I. The Withdrawal of the Proposed 1977 Strengthening Amendments: Petition for Reconsideration

A. Background

In 1976, EPA promulgated a standard for vinyl chloride (VC) which was significantly compromised by consideration of factors that EPA is not authorized to consider under Section 112 of the Clean Air Act. EPA rejected certain requirements which would have further curbed VC emissions either on the basis that the agency

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1 No. 76-2045 (D.C. Cir., filed Nov. 19, 1976).

2 Because the withdrawal appears to be a final agency action, NRDC has filed a petition for review in the Court of Appeals for the District of Columbia Circuit. NRDC v. EPA, No. 85-1150 (D.C. Cir., filed Mar. 8, 1985).

deemed them not to be adequately demonstrated or deemed their cost to be too high. Certain control requirements were rejected even though they were already in use on some sources, or even though they were nothing more than reasonably forecasted improvements that the sources were fully capable of making. These technological and economic tests are inconsistent with the "ample margin of safety" requirement of Section 112(b)(1)(B).

Because EPA had not complied with the requirements of Section 112, EDF filed a petition for review in the U.S. Court of Appeals for the D.C. Circuit.3 After significant discussions between the parties, the case was settled with an agreement under which EPA obligated itself to propose amendments to strengthen standard in specified ways. At the heart of the agreement was EPA's recognition of a "zero emission goal" to be approached as closely as possible, and EPA's agreement to propose an immediate strengthening revision and to undertake a review of the standard in three years leading to a further strengthening revision. As part of the compromise settlement, EDF agreed to dismissal of this specific case. EDF, however, conceded none of its legal objections to the construction of Section 112 advanced by EPA in the 1976 standard.

B. The 1977 Proposed Amendments

The improvements to the standard contemplated by the settlement agreement were published on June 2, 1977.4 EPA

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3 See note 1.

4 42 Fed. Reg. 28154.

specifically recognized a "zero emissions goal." EPA restated its conclusion (with which we agree, of course) that VC, as a carcinogen, has no known threshold of effect and endangers public health at any level of exposure. The agency then stated:

> In order to assure that the standard continues to approach the only level of emissions which is known to be absolutely protective of health, namely zero emissions, EPA is proposing amendments which require more efficient use of existing control technology at existing plants, and which encourage technology to reach this goal without banning vinyl chloride.[5]

EPA proposed the following specific requirements:

(1) To lower the emission limit for emissions from equipment used in VC and polyvinyl chloride (PVC) production from the level of 10 ppm promulgated in 1976 to 5 ppm. The proposed 5 ppm limit would take effect immediately for new sources and within three years for existing sources.

(2) To eliminate the special 0.2 g kg limit for oxychlorination reactors as it applies to new reactors and require new reactors to meet the 5 ppm limit. This could be accomplished, EPA found, by using oxygen, rather than air, as the feed.

(3) To strengthen PVC stripping requirements for new PVC resins by limiting residual VC after stripping to one fourth the levels allowed by the 1976 standard.

(4) To require a VC emissions offset when a new source of VC emissions is located within 5 miles of an existing VC source.

(5) To review and strengthen the standard within three years of promulgation of these amendments.

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5 Id. at 28154.

As we discuss below, EPA's own studies and other evidence clearly demonstrate that these requirements are achievable.6

C. The Withdrawal

EPA, however, has now rejected the proposed amendments for a combination of reasons that are not legally cognizable and that ignore the evidence in the record. The January notice states that the June 1977 proposal is being withdrawn because the proposed amendments are not now considered "appropriate." The notice then reviews each of the requirements proposed in 1977 and rejects them on the basis of a combination of two types of arguments: (1) that the technology to accomplish these requirements allegedly has not been demonstrated, and (2) that the requirements are allegedly not justified on a cost-benefit basis.7 We first address the legal problems with this notice, and then the evidentiary problems.

1. Legal Violations

(a) Failure to Propose the Withdrawal. The withdrawal was announced as a final action, without being preceded by a proposal. This course of action contrasts sharply with the course of action followed by EPA in the case of benzene. When EPA decided to withdraw its benzene proposals for three source categories last year, the agency issued a proposal and offered the public an

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6 In the years following the proposal, EDF repeatedly urged EPA to promulgate the amendments. See letter from Robert Rauch, EDF Staff Attorney, to Douglas Costle, EPA Administrator, Feb. 3, 1978; letter from Rauch to David Hawkins, EPA Assistant Administrator, Aug. 15, 1978; letters from Larry Corcoran, EDF Staff Attorney, to Costle, Apr. 18 & June 13, 1980.

7 50 Fed. Reg. 1183-86.

opportunity to comment. NRDC and EDF object to the agency's refusal to do so in this case.

(b) The Role of Cost Considerations. EPA opens its discussion by stating its current view of the basis for the current standard, as well as the basis which guides EPA's current actions. EPA states:

> The current VC standard was established based on judgments concerning the costs and benefits of the standard to society. The standard is not designed to eliminate VC exposure risk entirely. Rather, it strikes a balance between public health protection and the cost of that protection.8

This balancing of costs and benefits, however, is contrary to the requirements of Section 112 of the Clean Air Act. There are at least three decisions of the D.C. Circuit whichreject assertions that cost considerations are relevant or permissible under a "margin of safety" statute such as Section 112. The D.C. Circuit has twice held that under Section 109(b)(1) ofthe Act (which requires EPA to set NAAQSs at the level which protects public health with "an adequate margin of safety"), standards may not be compromised by cost considerations.9 In addition, interpreting the "ample margin of safety" requirement in Section 307(a) of the Clean Water Act, the D.C. Circuit rejected the claim

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8 Id. at 1183.

9 Lead Industries Ass'n v. EPA, 647 F.2d 1130, 1148-51, 1153 (D.C. Cir. 1980), cert. denied 449 U.S. 1042 (1980); American Petroleum Inst. v. Costle, 665 F.2d 1176, 1185-86 (D.C. Cir. 1981), cert. denied 102 S.Ct. 1737 (1982).

that EPA may consider costs when establishing an ample margin of safety standard for a toxic water pollutant.10

Likewise, the Supreme Court has at least three times rejected efforts to imply the relevance of cost-benefit considerations under statutes which direct agencies to base decisions on public health or environmental protection factors.11

Acknowledging the legal limitations expressed in the terms of the law and their legislative history, EPA has from time to time nonetheless tried to defend the use of cost-effectiveness or cost-benefit analysis under Section 112 with the argument that Congress did not mean what it plainly said. According to this argument, the Congressional policy choice was, in EPA's view, so unwise that it should be ignored. In its place, EPA substitutes the agency's own policy choice.

This sort of administrative attempt to rewrite a law with which the agency does not agree has been uniformly rejected by the courts. In all six of the cases cited above, the Court of Appeals and the Supreme Court have emphasized that neither an agency nor a court may second-guess Congressional limitations on the role of cost considerations under health and safety statutes. EPA cannot violate this restriction.

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10 Hercules, Inc. v. EPA, 598 F.2d 111-12 (D.C. Cir. 1978).

11 Union Electric Co. v. EPA, 427 U.S. 246 (1976) (no requirement will be implied for EPA roconsider costs when reviewing a state implementation plan requirement adopted to meet a primary standard); TVA v. Hill, 437 U.S. 153 (1978) (no "reasonableness test to be implied into the Endangered Species Act); American Textile Mfrs Inst. v. Donovan, 452 U.S. 490 (1981) (no cost-benefit test under the Occupational Safety and Health Act).

(c) Technology Demonstration Requirements. In rejecting the proposed lowering of the 10 ppm emission limit to 5 ppm, EPA states simply that based on experience to date, "10 ppmv represents the lowest level of control which has been consistently achieved."[12] Before addressing this statement empirically, we must take issue with its legal premises.

EPA apparently presumes that Section 112 of the Act establishes a requirement for demonstrating that a level of control has been "consistently achieved" in the past. While a demonstration requirement under Section 111, there is no such requirement under Section 112. None of the key words of Section 111 which establish such a test for new source performance standards[13] are present in Section 112.

The Supreme Court made clear in Union Electric that the omission from sections of the 1970 Clean Air Act of words relating to technological and economic showings reflects a deliberate Congressional choice to which EPA and the courts must give effect.[14] Sections of the law where such requirements are lacking are "technology-forcing." In the Court's words, allowing considerations of technological infeasibility claims:

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12 50 Fed. Reg. at 1184 (emphasis added).

13 An NSPS shall reflect "the degree of emission reduction achievable through the application of the best system of continuous emission reduction which (taking into consideration thecost of achieving such emission reduction and any nonair quality health and environmental impacts and energy requirements) the Administrator determines has been adequately demonstrateed for that category of sources." Section 111(a)(1)(C).

14 427 U.S. at ___. [8 ERC at 2146-47.]

> would frustrate congressional intent. It would permit a proposed plan to be struck down as infeasible before it is given a chance to work, even though Congress clearly contemplated that some plans would be infeasible when proposed. . . . Technology-forcing is a concept somewhat new to our national experience and it necessarily entails some risks. But Congress considered those risks in passing the 1970 amendments and decided the dangers posed by uncontrolled air pollution made them worth taking.[15]

The Court's reasoning applies equally to a hazardous air pollutant standard issued under Section 112.

EPA's apparent test -- that a control requirement must have been achieved in the past before it may be required for the future -- is also inconsistent with tyhe agency's clear technology-forcing responsibility under sections such as Section 202. Section 202(a)(1), for example, instructs EPA to set a standard for a future application date which accomplishes such improvements in controls as are reasonably forecasted by then. EPA has the authority, indeed the responsibility, to project such progress and base the future standard on it. As the D.C. Circuit stated in NRDC v. EPA, the diesels case: "The Clean Air Act requires the EPA to look to the future in setting standards . . . ."[16] And as stated as far back as the 1970 Senate Report:

> [EPA] is expected to press for the development and application of improved technology, rather than be limited by that which exists. In other words, standards should be a function of

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15 Id. at 268-69. [8 ERC at 2151].

16 NRDC v. EPA, 655 F.2d 318, 328 (D.C. Cir. 1981), cert. denied sub nom General Motors v. Gorsuch, 16 ERC 1616 (1981).

> the degree of control required, not the degree of technology available today.17

The 1977 proposal, which contemplated setting a 5 ppm emission limit with a three year leadtime for compliance by existing sources, is precisely this sort of standard.

If technology-forcing authority clearly exists under sections of the Act which are not driven by health considerations and which explicitly provide for considering costs, then certainly such authority exists under Section 112, which is driven solely by the mandate to protect public health with an ample margin of safety. EPA recognized this in 1977, but is denying it now. The withdrawal is based on an incorrect statutory construction and is therefore invalid.

(2) Conflict with the Evidence

When examined in accordance with Section 112's requirements, the evidence in EPA's own support documents will not support EPA's rejection of the 1977 proposed amendments.

(a) The 5 ppm Standard. The bases given for withdrawing the proposed 5 ppm emission limit are:

(1) that the 5 ppm limit "was not based on data for control technology different from that analyzed" in 1976;

(2) that it was opposed by industrial commenters on the grounds that it would require maintaining an average level lower than 5 ppm, and that it would result in what they (and apparently EPA) view as "little" overall emission reduction; and

(3) that the commenters objected to the "zero emission goal."18

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17 S. Rep. No. 1196, 91st Cong., 2d Sess. 24 (1970).

18 50 Fed. Reg. at 1184.

EPA then stated that the 5 ppm limit was withdrawn because it had not been "consistently achieved" on existing facilities. As stated above, this is not the legally correct test. And when the record is examined, it fully supports the achievability of the 5 ppm limit by new sources upon commencement of operations, and by existing sources within three years of promulgation.

In contrast to the agency's current position, the 1977 proposal stated that the 5 ppm limit would not require the installation of new equipment. Rather, its purpose was "to force owners and operators to maximize the effectiveness of existing control systems."[19] The evidence amassed by EPA since then shows that the 5 ppm level is in fact achievable both by better use of existing equipment and by new and upgraded equipment. The document "Vinyl Chloride - A Review of National Emission Standards"[20] states: "Primary control devices [e.g., incineration, solvent absorption, refrigeration] are reducing emissions, in most cases, well below the 10 ppm level for exhaust gases."[21] Specifically:

- o A series of thermal incineration tests at one plant in Kentucky demonstrated VC levels consistently at 0.26 ppm VC or below, less than three percent of the 10 ppm limit, and less than six percent of the proposed 5 ppm limit.[22]

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19 42 Fed. Ref. at 28155.

20 EPA-450/3-82-003.

21 Id. at 4-1 (emphasis added).

22 Id. at 4-8.

- Flares are now rated at at least 90 percent effectiveness in destroying VC, which allows a 5 ppm limit to be met for any streams under 50 ppm VC.[23]

- Two PVC plants have demonstrated that a double bed carbon adsorptionsystem can achieve compliance with a 5 ppm limit. While the Review states that they are effective in meeting the 10 ppm limit, it also states: "When a probe at the outlet of the bed indicates an approaching 5 ppm level (as an indicator of breakthrough), the waste stream is diverted to the other bed while the first bed is being regenerated."[24] This indicates the achievability of the 5 ppm level.

- Solvent absorption is available for both PVC and EDC/VC plants. The Review describes a B.F. Goodrich system, improved since the original 1976 support document was written. A 99.99 percent recovery efficiency is reported for this system. This should be sufficient to meet a 5 ppm limit on most, if not all, streams. The solvent is described as "proprietary, commercially available, inexpensive, and reputed to be low in toxicity."[25]

- Tenneco has developed a process of reacting VC with ozone in the presence of activated carbon which reduces VC to less than approximately 1 ppm from streams containing 10-10,000 ppm VC.[26]

The availability of these measures belies any claim that the 5 ppm limit cannot be achieved by new sources, or by existing ones given a three year lead time.[27]

As for industry's argument that the 5 ppm limit would result in "little" overall reduction in VC, these measures could reduce

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23 Id. at 4-12.

24 Id. at 4-13 -- 4-14.

25 Id. at 4-14 -- 4-15.

26 Id. at 4-16 -- 4-17.

27 It bears emphasizing that the 1977 proposal contemplated a procedure through which an existing source could show EPA that the 5 ppm limit was still not achievable and obtain an extension or a higher limit.

the estimated 680 kg/yr from a 68 Gg/yr PVC plant by half.[28] Given the carcinogenic nature of VC and the requirement of Section 112 for protection of public health with an ample margin of safety, this reduction cannot legally be foregone. As for the industry commenters objections to the "zero emission goal" toward which the 1977 proposed amendments would go, the ample margin of safety provision requires no less.

(b) Oxychlorination Vent Standard. The proposed 1977 amendments would have required the oxychlorination vent to meet the 5 ppm level on new sources. The 1977 proposal states that this can be accomplished by the use of oxygen as a feed instead of air. The 1977 proposal also cites studies showing that this has been found to be economical.[29] The 1985 withdrawal notice cites no discussion of the use of oxygen as a feed. We can find no such discussion in the VC Review either. EPA has failed to justify the withdrawal of this proposal.

(c) Stripping. The 1977 proposal would have cut the residual VC limit for new dispersion resins from 2000 ppm to 500 ppm, and the limit for other new resins from 400 ppm to 100 ppm. The proposal stated that EPA believed most new resins could meet these levels, but if one could not, a manufacturer had the option of choosing not to begin making it. EPA now states that because of difficulty administering the proposed distinction between new and existing resins, the agency chose to examine whether all

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28 VC Review at 4-6, Table 4-4.

29 42 Fed. Reg. 28155, 28157.

resins could be stripped to these lower limits. (The January 1985 notice reflects no effort to change or fine-tune the "new resin" definition so that it would work.) The notice states:

> The review study found that resin stripping has improved since the current standard was promulgated, and that some processors can achieve lower resin residual VC levels than those required in the original standard. In certain cases, some resins can meet the more stringent levels specified in the previously proposed amendments.

But because it has not been shown that all resins can at this moment be stripped satisfactorily to the lower levels, no levels lower than those specified by the current standard have been "demonstrated," and no lower level will be required for any resins, new or old.30

This is, first of all, an application of the wrong legal test. There is no such demonstration requirement. The Review study in fact shows that an impressive percentage of PVC production can already meet the lower limits, and that much of the remaining production is close.31 If EPA set this target out for new facilities, or for existing ones with a three year lead time, it clearly could be achieved simply by copying the equipment and procedures used by the leading facilities now.

D. Conclusion

For the reasons given above, NRDC and EDF submit that the withdrawal is not supported by the law. Nor is it supported by the evidence, when it is evaluated according to the requirements

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30 50 Fed. Reg. at 1185.

31 See Review at 4-55 --4-56, Table 4-11.

and limitations of the law. We therefore request that EPA reconsider the withdrawal and publish the proposed amendments. This should be done, we submit, no later than at the time final action is taken on the new amendments proposed in January, to which we now turn.

II. The 1985 Proposed Amendments: Comments

The principal feature of the proposed "administrative revisions" to the standard is the change in the relief valve discharge requirements. Because the effect of this change is to substantially weaken the current standard, NRDC and EDF submit comments in opposition below. We also comment on two other changes: the amendments proposed for the reporting requirements, and the leak detection and elimination requirements.

A. Relief Valve Discharges

1. The Proposal to Grant an Allowable Discharge Rate

The current standard bars all relief valve discharges except in "emergency" situations. An emergency does not exist if the discharge is "preventable." Currently, EPA enforcement personnel examine relief valve discharge reports made by companies to determine if they were preventable through the use of available equipment or procedures. If they are found to be preventable, they are not considered emergencies and constitute violations of the standard.

In recent years, enforcement of the relief valve discharge standard by EPA and the Department of Justice has picked up.

While it is not all it could be, it is a substantial effort. It has been a very successful effort so far as well.

The proposal states, however, that primarily because of a "significant" use of agency resources in analyzing the preventability of discharges, EPA has chosen to revise the standard to permit an allowable number of relief valve discharges per facility per year. PVC reactor discharges would be allowed 0.35 discharges per 100 polymerization batches (with an upper limit of four allowed discharges per year for the suspension resin process). Nonreactor sources would be allowed 0.25 discharges/100 batches, with an upper limit of three per year. Continuous process units would be allowed 1 discharge per year. EDC/VC plants would be allowed four discharges per year.

NRDC and EDF strongly oppose granting the industry an allowed, "free" rate or number of discharges. As a matter of principal, all preventable discharges must be avoided. They are the single largest remaining type of VC emissions, accounting for thousands of pounds per event, and tens of thousands of pounds per year at some sources. A single discharge can release tens of thousands of pounds of VC. See, e.g., the abysmal record of releases at the Formosa plant in Delaware.

EPA enforcement policy states that releases are presumed preventable unless a source demonstrates otherwise. To so demonstrate, the source has to show that neither proper employee training, inspection and maintenance of equipment, proper design and operation of control equipment, nor installation of all controls needed to meet the standard would have sufficed to

prevent the discharge. If a discharge has occurred before, that fact is to be taken into account in deciding if subsequent discharges could have been anticipated and preveneted. Proper instrumentation and controls are required before a release can be deemed unpreventable. Likewise, the injection of short-stop chemicals must have been tried where possible. In addition, enforcement policy treats a release as preventable if a firm could have used a gasholder system to contain releases until they could be treated.[32]

As a matter of empirical fact, the proposed discharge allowances constitute a significant weakening of the standard. EPA preventability analyses, conducted pursuant to this long standing EPA enforcement policy, have routinely resulted in the conclusion that the vast majority of releases are preventable.

The very support document on which EPA relies for the proposed changes to the relief valve requirements itself indicates that the new allowable release rates will exceed what would occur under the existing standard and enforcement policy. For the purposes of developing these rates, EPA's contractor, Radian, applied the following criteria:

> Based on information gathered from plant visits, contacts with regional offices, 10-day compliance reports, and vendors, it was judged that certain types of discharges can be

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32 See, e.g., Memorandum from Director, Division of Stationary Source Enforcement, to Lawrence Goldman, Chief, Enforcement Branch, Region I (Apr. 24, 1979), re: "Vinyl Chloride Relief Valve Discharges from PVC Reactors-Borden Chemical." See also Memorandum from Director, Division of Stationary Source Enforcement, to Stuart Roth, Attorney, Enforcement Division, Region I (Feb. 28, 1978). (These memoranda are attached as Appendix A)

> prevented by reasonable measures. For example, discharges caused by operator error, due to operator negligence or failureto follow standard operating procedure (SOP), were considered clearly "preventable." In addition, operator errors resulting from insufficient training or lack of established SOP were judged clearly "preventable". . . . Another example of "preventable" discharges is discharges due to premature releases from relief devices. . . . Finally, discharges recurring for the same reasons as previous discharge incidents were considered "preventable." . . .
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> Although other causes for specific discharge occurrences may be preventable, this assessment would need to be done on a case-by-case basis and would require, in many cases, more information than is available in the 10-day compliance reports. Thus a more refined preventability assessment can not be made with the available data. For the purposes of this analysis, only the general discharge categories described above are identified as clearly "preventable."33

In other words, were the current enforcement policy to continue to be followed under the current regulation, more discharges would be found to be preventable. Additional control measures besides those mentioned above would be applied.

Further indication that the proposed allowable discharge rates are inappropriate comes from the statements, in the Relief Valve report, that these rates would be complied with at present by the bulk of the industry.34 In other words, these levels

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33 Memorandum from Reese Howle and Karen Fidler, Radian Corp., to File, re: "Vinyl Chloride Standard - Numerical Limits for Relief Valve Discharges" (Apr. 16, 1984) at A-6, attached as Appendix A to "Vinyl Chloride: Relief Valve Study," EPA-450/3-85-002 (emphasis added).

34 Id. at A-6 -- A-7.

would legitimize the current discharge rates of the industry, regardless of the ability to lower them further.

The VC Review Study, in fact, describes a variety of additional control measures beyond those mentioned in the Relief Valve report. There have been significant advances in the use of instrumentation and computer controls, and in the development of short-stop chemicals and in the development and use of systems to insert them into reactors which are overpressurizing. Gasholders, about which more will be said below, are in use in at least three of the five plants surveyed for the Relief Valve report, and are capable of containing many, if not all, discharges until they can be treated by primary control devices.[35] Several companies' effective preventative systems are described in the VC Review Study.[36] Conoco, for example, has developed a killing agent capable of preventing discharges under worst-case conditions.[37]

The only reason offered thus far for the change is the fact that the present requirements entail use of allegedly "significant" agency resources in case-by-case preventability analyses.[38] To our knowledge, however, EPA has presented no

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35 See VC Study, 4-18 -- 4-40; Relief Valve Report, 4-2, Table 4-1.

36 VC Review Study, 4-40 -- 4-48.

37 Id. at 4-43 -- 4-46.

38 EPA also states that the current standard leads to "uncertainty" for the industry, as it does not know exactly what discharges EPA will consider preventable. This appears to us to be a highly salutory uncertainty; the goal of the current standard is to come as close as possible to eliminating relief valve discharges and the uncertainty about risk of being in violation of the standard tends to stimulate greater efforts to prevent

analysis to support this resource concern. Moreover, even granting that the case-by-case analyses consume some resources, we submit that EPA cannot legitimately resolve its resource problem by weakening the standard. Rather, if EPA lacks the resources to carry out its duties, its obligation is to tell Congress what it needs to do the job right.

2. The Failure to Require Gasholders

NRDC and EDF submit that EPA should be strengthening the standard to specify use of all available equipment and procedures that can prevent discharges or, should they occur, prevent or minimize the escape of VC to the atmosphere. Foremost among the control measures not now required by the standard is a gasholder system. As mentioned above, EPA's support documents show that such a system is feasible and is fact in use on a number (at least three) of facilities. Just this month, the State of Delaware entered a consent agreement with Formosa Plastics under which that company has become obligated to install such a system at its plant.39

EPA might advance two reasons for not requiring the use of a gasholder system on each plant. First, EPA might deem the cost to be too high. As demonstrated above, however, cost considerations may not be considered under Section 112. Moreover, it is difficult for NRDC and EDF to accept such a contention from EPA's regulation-writing side in light of the fact that the agency's

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discharges.

39 Delaware v. Formosa Plastics Corp., C.A. 84C-DE-73, Para. I(B) (De. Sup. Ct, consent order filed Mar. 13, 1985).

(and the states') enforcement side has proved capable of achieving such requirements in consent orders.

The second reason EPA might advance is a contention that some facilities may be able to prevent discharges almost entirely without such systems. To this we respond that no facilities will be able to eliminate such discharges entirely; there will continue to be "emergencies" that are not judged "preventable." There is no reason to allow these emissions to reach the atmosphere, even if the discharge valve releases themselves are unpreventable. For these releases there remains a vital purpose served by gasholder systems.

NRDC and EDF therefore request that EPA reevaluate its position on gasholder systems and related equipment, and promulgate regulations requiring their installation and use.

B. Leak Detection and Elimination

NRDC and EDF do not support the proposed adoption of the generic leak detection and repair program promulgated in June 1984 in place of the current leak detection and elimination programs for VC, as it appears that the effect of this change will be to weaken the standards. EPA states that the regulated firms will have the choice whether to stick with their current programs or to adopt the generic one; that option will predictably be exercised only by companies which find their current programs weaker than the generic one. Firms with stronger requirements will likely switch to the generic program.

One place where the weakness of the generic program versus the current ones can be seem is the definition of a "leak." The

generic program, and the proposed revisions to the VC standard, would define a "leak" as a portable monitor reading of 10,000 ppm or more. But current leak detection and elimination programs developed by the companies and approved by EPA incorporate much lower "leak" definitions. The VC Review Study reports that the "leak" definition under the current programs ranges from 300 ppm to 5 ppm.40 These levels are from three to 0.05 percent of the proposed "leak" definition. There is no justification for such a change.

We request that EPA prepare and air for comment a point-by-point analysis of the current leak detection and elimination programs as they compare to generic program proposed for adoption.

C. Reporting Requirements

NRDC and EDF object to the proposed changes in reporting requirements. In particular, we object to the proposed repeal of the 10-day requirement for reporting relief valve discharges, and the proposed substitution of a quarterly reporting requirement. Frankly, we are surprised EPA would consider such a reduction in the reporting obligation at this time, in the wake of the Bhopal catastrophe.

The 10-day reporting requirement serves to give EPA, state officials, and the public contemporaneous knowledge of releases of this carcinogenic compound. Such notice could air in the prevention of repeat incidents. It also serves the public's right

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40 4-72, Table 4-14.

to know what it is forced to breathe. Finally, allowing a longer interval for reporting these releases would tend to promote a perception that a reported release is merely "past history."

We submit that taking these sometimes enormous releases with the seriousness they warrant requires immediate notice. AIn fact, we urge EPA to tighten the 10-day requirement by requiring notice to EPA within 24 hours. Such a requirement would be more consonant with the requirements and spirit of the CERCLA reporting requirements, about which more is said below.

NRDC and EDF also object to the proposed repeal of the requirement to report all test results, not just those that are in excess of standards. An affirmative requirement to report all results promotes accuracy and completeness. It also would permit EPA to build a data base from which to evaluate possible revisions of the substantive requirements of the standards during the periodic reviews mandated by Section 112.

D. CERCLA Reporting Requirements

The Vinyl Institute has filed comments questioning the applicability of CERCLA and its reporting requirements, which are discussed in the proposal.[41] In our view, the releases of VC from relief valve discharges are clearly reportable under CERCLA, except to the extent that they are the result of genuine emergencies. Any non-emergency, preventable release is not permitted by the current standard (and should not be under any revised standard). Such a release is not a "federally permitted

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41 50 Fed. Reg. at 1193.

release" and therefore is not exempt from the CERCLA reporting requirements.

D. Conclusion

For the reasons explained above, NRDC and EDF object to the proposed changes in the relief valve discharge standards, the failure to propose and promulgate gasholder systems and other effective controls, the proposed changes in the leak detection and elimination requirments (such as the definition of a "leak"), and the reporting requirements.

III. Conclusion

NRDC and EDF request that EPA re-examine the withdrawal of the proposed standard for the reasons given in our petition for reconsideration contained in Part I of this submission. We also request that EPA reconsider and modify its proposed changes in the VC standard in conformity with our comments set forth in Part II.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

24 APR 1979

OFFICE OF ENFORCEMENT

MEMORANDUM

SUBJECT: Vinyl Chloride Relief Valve Discharges from PVC Reactors-Borden Chemical

FROM: Director
Division of Stationary Source Enforcement

TO: Lawrence M. Coldman, Chief, Enforcement Branch
Region I

This is in response to your memo of March 29, 1979, requesting guidance on what constitutes a "preventable" relief valve discharge under 40 CFR 61.65(a) and on what steps a source can be expected to take in order to prevent the occurrence or recurrence of relief valve discharges.

When a source reports a relief valve discharge we should presume that the discharge was not due to an emergency, but was preventable and is therefore a violation of Section 61.65(a). The source will then have the opportunity to demonstrate otherwise. In order for a discharge to be considered an emergency, the source would have to demonstrate that it could not reasonably have been expected to anticipate the discharge and then to prevent or contain it. As a minimum, the source would have to demonstrate that the discharge could not have been prevented by implementing any of the following procedures:

1) employee training programs including instruction on emergency procedures,

2) equipment inspection and maintenance programs,

3) proper design and operation of process and control equipment, and

4) installation and operation of all control equipment needed to comply with the vinyl chloride standard.

CMA 015313

One factor which should be taken into consideration in determining whether a discharge could have been anticipated and therefore prevented, is the plant's prior history with respect to discharges. If the source has previously experienced one or more discharges, some or all of which were caused by the same factor, the source is expected to have taken corrective measures designed to prevent or contain future discharges.

In summary, a relief valve discharge is a violation of Section 61.65(a) if it could have been anticipated and preventive measures could have been taken or if the discharge could have been prevented by properly training employees or by properly operating, maintaining and inspecting equipment.

In particular, your memo requested guidance on what constitutes a preventable operator error. As is the case with other discharges, we should presume each discharge to have been preventable and then provide the source with the opportunity to demonstrate otherwise. As a minimum, the source would have to demonstrate that operators were well-trained initially and had received refresher training courses, as necessary, to cover both normal and upset conditions. Refresher courses should have been provided particularly after the occurrence of an initial relief discharge caused by operator error. The source should be able to provide documentation as to the dates training was offered and the operations covered.

The final issue to be addressed in this memo concerns the types of actions a source should be expected to take, after experiencing a relief valve discharge, in order to prevent future discharges. The preamble to the proposed vinyl chloride standard lists, on page 59539, several measures a source can reasonably be expected to take to prevent relief valve discharges. Measures which can be taken to prevent discharges from PVC reactors include, but are not limited to, the following:

1) properly instrumenting the reactors to detect upset conditions,

2) injecting chemicals to stop the polymerization reaction during upset conditions,

3) venting the reactor contents to a gasholder during upset conditions and ultimately to a recovery system,

4) providing employees with improved training or preventing and handling upset conditions, and

5) maintaining a backup source of power. See 40 FR 59539, December 24, 1975.

It is apparent from this discussion that in developing the vinyl chloride regulations we envisioned the use of gasholders to prevent or contain relief valve discharges. Therefore, Borden Chemical and any other PVC manufacturer can reasonably be expected to install gasholders to prevent discharges if other preventive measures, implemented in a timely manner, fail. In fact some PVC manufacturers have already installed gasholders for this purpose.

Should you have any further questions on this issue, please contact Libby Scopino at 755-2564.

Edward E. Reich

cc: Susan Wyatt, ESED
Marsha Spink, Region I
Marcus Kantz, Region II
Peter Schaul, Region III
Leon Folsom, Region IV
Bruce Varner, Region V
Martin Brittain, Region VI
Paula Bisson, Region IX

Enforcement Division Directors, Region I-VI & IX

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF ENFORCEMENT

MEMORANDUM

SUBJECT: Relief Valve Discharges
PPG Facility at Guayanilla, Puerto Rico

FROM: Director
Division of Stationary Source Enforcement

TO: Stuart Roth, Attorney
Enforcement Division, Region II

This is in response to your memo of January 10, 1978, requesting guidance on enforcement options available to prevent relief valve discharges of VCM from vinyl chloride storage tanks at the Guayanilla PPG plant.

We believe that the most effective approach to eliminating emissions caused by relief valve discharges would be requiring that PPG take measures designed to prevent relief valve discharges and install equipment designed to contain discharges, should they occur in spite of any preventative efforts. We feel that this position is justified by the preamble to the proposed standards which states, with respect to relief discharges from equipment other than reactors, "...increasing pressure due to inert gases in the system can be relieved by manual venting to a gas holder or recovery system. The conditions which lead to discharges can also be prevented in most cases by proper handling and transfer of vinyl chloride or materials containing vinyl chloride". (See 40 FR 59539, December 24, 1975).

One possible option which could satisfy the above requirements and which combines options listed in your memo, would be installation of additional refrigeration units designed to serve as backups for the existing units in combination with a gas holding tank which could contain any releases resulting from total refrigeration failure or from other equipment failures or deficiencies, including any releases which occur during the time it takes to switch over from a malfunctioning refrigeration unit to a backup unit. Of course, PPG will be responsible for developing a plan for preventing relief discharges, including any necessary operation and maintenance requirements applicable to the

CMA 015316

In your memo you request clarification of what constitutes an "emergency relief discharge". As stated in our memo of December 15, 1977, the preamble to the proposed vinyl chloride regulation describes an emergency discharge as one which cannot be avoided by taking preventative measures, such as those caused by natural disasters (40 FR 59539, December 24, 1975). Natural disasters include hurricanes, tidal waves, earthquakes, etc. Discharges which could have been prevented will not be considered "emergency discharges".

Finally, you request guidance on the enforcement approach to be used to require installation of equipment designed to minimize the amount and frequency of discharges. As you know, an administrative order (Section 113(a) order) is an inappropriate method to remedy a NESHAP violation unless the order requires immediate compliance with the standards. In some circumstances, a waiver of compliance may be issued which requires the installation of equipment necessary for compliance with the standard if the equipment can be operational and the source can be in compliance by October 21, 1978. Note that the issuance of a waiver of compliance is discretionary, and consideration should be given to both the source's good faith and whether we believe the terms of the waiver will be complied with and final compliance ultimately achieved. In addition to any requirements designed to protect public health during the period of the waiver (40 CFR §61.11(b)(3)) and any other requirements generally applicable, any such waiver should include very detailed incremental dates for design and installation of the equipment. The waiver should be structured so that the first increment will become due as soon after issuance as possible. This will ensure prompt action by the source while still allowing EPA sufficient time to act should PPG fail to comply. Violation of the waiver requirements could, of course, result in the commencement of civil or criminal action.

However, if the source has not requested a waiver to allow installation of the required equipment, if the source has not acted in good faith, or if the Region believes it is impossible for the equipment to be installed and the source to be in compliance by October 21, 1978, civil action should be commenced seeking injunctive relief for expeditious installation of the necessary control equipment. In light of the hazardous nature of the pollutant involved, we would urge quick preparation of any referral package (including any penalty calculations necessary to comply with the penalty policy). In addition, we can assure you that we would expedite our review and referral of the package to the Department of Justice.

If you require any further assistance in this matter, please feel free to contact Doug Farnsworth (755-2570) regarding any legal questions or Libby Scopino (755-2564) regarding any technical questions.

William F. Adams
for Edward E. Reich

cc: Susan Wyatt, ESDD
Marcus Kantz, Region II

sioner declines to define a substance as a "food additive," though it comes within the strictly literal terms of the statutory definition, he must state the reasons for exercising this limited exemption authority. In context, a decision to apply the literal terms of the statute, requires nothing more than a finding that the elements of the "food additive" definition have been satisfied.[27]

In the case at hand, the Commissioner made specific rulings that the component element of the definition was satisfied with respect to acrylonitrile beverage containers having an RAN level of 3.3 ppm or more. These rulings were premised on a projection, based on an extrapolation from reliable data, of migration of acrylonitrile monomer in then-undetectable amounts. In light of the supplementary submission made in response to the post-argument inquiry of this court, we find that the determination can be made for the 3.3 ppm RAN containers with an appropriate degree of confidence, and with the support of the required quantum of evidence.[28]

[12, 13] Turning to the safety element of the definition, the Commissioner determined that the scientific community had insufficient experience with acrylonitrile to form a judgment as to safety. Based on this lack of opinion, the Commissioner made a finding that acrylonitrile was not generally recognized as safe within the meaning of the statute. The Commissioner acted within his discretion in making such a finding, but we note that the underlying premise may be affected, perhaps weakened, perhaps strengthened, with time and greater experience with acrylonitrile.[29] This finding on the safety element will be open to reexamination on remand at the discretion of the Commissioner. He would have latitude to consider whether acrylonitrile is generally recognized as safe at concentrations below a certain threshold, even though he has determined for higher concentrations that in the view of the scientific community acrylonitrile is not generally recognized as safe.

V

[14] Petitioners also made a claim of discriminatory treatment—that the Commissioner is applying policies in the petitioners' case that have not been applied in other similar circumstances. However, there is no claim that the Commissioner was motivated by discriminatory intention to bring the petitioners before the agency and to focus on their product. Petitioners came before the agency in the ordinary course. Once the Commissioner undertook scrutiny, he shifted the lens of his microscope to a higher power—but that is no ground for objection, so long as the final action remains within the legitimate scope of discretion.

The decision of the Commissioner is affirmed in part, and in part is remanded to provide the opportunity for reconsideration.

So ordered.

27. Absent a showing of bad faith or other extraordinary circumstances, a court will not consider meritorious the claim that the Commissioner has abused his discretion in declining to exercise his exemption authority for *de minimis* situations. This is an area of decision by its nature committed to the informed discretion of the Commissioner.

28. *See* note 20 *supra*. On judicial review, the court must be satisfied that the Order of the Commissioner is based "upon a fair evaluation of the entire record." 21 U.S.C. § 348(f)(2), (g)(3) (1976). The Commissioner applied the "component" part too automatically, and in the future must support his decision with more than a conclusory reference to the diffusion principle of the second law of thermodynamics.

29. Like the "component" element of the definition, the "safety" element may at times call for more rigorous examination. Thus, the Commissioner has discretion in determining when the statute applies to a given substance, but substances that do fall within its term should be so identified.

petitioners in the hearing as available as a result of ongoing technology, but the time constraint imposed by judicial mandate prevented the agency from scheduling the kind of administrative consideration that would ordinarily have been provided.

IV

Pretermitting various issues that should await conclusion of the remand proceedings, we turn to certain other important questions that are presented by the record, that have been fully briefed and argued, and that are ripe for resolution.[22]

The statute requires a demonstration of safety precedent to FDA approval of any "food additive."[23] The statutory definition of "food additive" which triggers that requirement contains a two part test. First, the *component* element of the definition states that the intended use of the substance must be reasonably expected to result in its becoming a component of any food.[24] Second, the *safety* element of the definition states that the substance must be not "*generally recognized [as] safe* under the conditions of its intended use."[25]

[7–9] Petitioners are concerned that the Commissioner has determined, or will determine, that the component element of the definition may be satisfied solely by that application of the second law of thermodynamics called the diffusion principle: *any* two substances that are in contact will tend to diffuse into each other at a rate that will be determined as a function of time, temperature, and the nature of the substances. Congress did not intend that the component requirement of a "food additive" would be satisfied by a mere recitation of the diffusion principle, a mere finding of any contact whatever with food. Petitioner's contention on this point is sound.

For the component element of the definition to be satisfied, Congress must have intended the Commissioner to determine with a fair degree of confidence that a substance migrates into food in more than insignificant amounts. We do not suggest that the substance must be toxicologically significant; that aspect is subsumed by the safety element of the definition. Nor is it necessary that the level of migration be significant with reference to the threshold of direct detectability, so long as its presence in food can be predicted on the basis of a meaningful projection from reliable data. Congress has granted to the Commissioner a limited but important area of discretion. Although as a matter of theory the statutory net might sweep within the term "food additive" a single molecule of any substance that finds its way into food, the Commissioner is not required to determine that the component element of the definition has been satisfied by such an exiguous showing. The Commissioner has latitude under particular circumstances to find migration "insignificant" even giving full weight to the public health and welfare concerns that must inform his discretion.

[10, 11] Thus, the Commissioner may determine based on the evidence before him that the level of migration into food of a particular chemical is so negligible as to present no public health or safety concerns, even to assure a wide margin of safety. This authority derives from the administrative discretion, inherent in the statutory scheme, to deal appropriately with *de minimis* situations.[26] However, if the Commis-

22. The issues fully ripe for decision at this time include questions of statutory interpretation that will be pertinent to the proceeding on remand.

23. *See* § 409(c)(3)(A), quoted in note 3, *supra*.

24. *See* note 2 *supra*.

25. *Id.*

26. *See, e. g., FPC v. Texaco, Inc.*, 417 U.S. 380, 399, 94 S.Ct. 2315, 41 L.Ed.2d 141 (1974); *Volkswagenwerk, A. G. v. FMC*, 390 U.S. 261, 276–77, 88 S.Ct. 929, 19 L.Ed.2d 1090 (1968); *United Glass & Ceramic Workers v. Marshall*, 189 U.S.App.D.C. 240, 242, 584 F.2d 398, 400 (1978); *Marine Space Enclosures, Inc. v. FMC*, 137 U.S.App.D.C. 9, 16, 420 F.2d 577, 584 (1969). *Cf. Ingraham v. Wright*, 430 U.S. 651, 674, 97 S.Ct. 1401, 51 L.Ed.2d 711 (1977). *Sniadach v. Family Finance Corp.*, 395 U.S. 337, 342, 89 S.Ct. 1820, 23 L.Ed.2d 349 (1969) (Harlan, J., concurring).

ever, the Commissioner would have latitude to issue a statement of policy based upon the results of the proceeding or remand that would specify what in his review was an acceptable RAN level. This would serve a technology-forcing objective.[19]

[4, 5] FDA opposes petitioners' post-argument motion for remand, asserting that the proffered new evidence will not affect the Commissioner's order insofar as that order precludes manufacture of beverage containers with RAN levels equal to or greater than 3.3 ppm—the type of container already tested. FDA points out that the material submitted in response to this court's inquiry affirmatively supports the validity of the Commissioner's findings and conclusions.[20] FDA contends that a petition for modification of the regulation, or a similar procedure, would be the appropriate vehicle for presentation of any new evidence indicating that migration ceases when RAN levels fall below a certain threshold.

As a general rule, courts defer to administrative agency orders closing the record and terminating proceedings. The rule has applicability in cases involving scientific matters notwithstanding the possibility that advances and experiments will yield new material data. Indeed, the importance of finality as a matter of administrative necessity may be magnified by the possibility—indeed probability—of advance in at least some areas. Procedures for rehearing or modifying orders are generally available to provide appropriate relief from any hardships or other harm.[21]

The general rule of finality applies in the usual case because the courts trust the administrator's ability to make a reasoned judgment that sufficient evidence has been submitted, that adequate time has been provided for rebuttal, and that the record should be closed. However, in this instance, the closing of the record did not reflect unfettered administrative judgment: FDA conducted these administrative proceedings under a time constraint dictated by an order of this court.

[6] The Court is also concerned that the Commissioner may have reached his determination in the belief that he was constrained to apply the strictly literal terms of the statute irrespective of the public health and safety considerations. As we discuss below, there is latitude inherent in the statutory scheme to avoid literal application of the statutory definition of "food additive" in those *de minimis* situations that, in the informed judgment of the Commissioner, clearly present no public health or safety concerns.

In the usual case, the general doctrine of necessity and finality serves the public interest in immediate protection of the consuming public. But in this case production of acrylonitrile beverage containers was deferred voluntarily even when this court issued a stay of the FDA order, and in any event it is now prohibited pending further proceedings.

Finally, we are concerned that the record reflects a momentum toward a precipitate determination. Several factors bear on our judgment. One is the text of the decision, with its lack of precision as to basis. Another is the fact that the beverage container evaluated by the Commissioner was characterized by a migration level well below the agency's initial limit. It was offered by

ally before him in the remand proceeding or any subsequent proceeding.

19. The submission by Monsanto is that no migration can be expected to occur from containers with RAN levels lower than 0.1 ppm. Salame Affidavit, note 16 *supra*, at ¶ 10. There is a further indication that the manufacture of beverage containers with RAN levels of less than 0.1 ppm is technologically feasible. Monsanto Memorandum, note 15 *supra*, at 7.

20. In view of the new data generated in response to the Court's inquiry, petitioners no longer contest that migration does occur from Monsanto's "Cycle-Safe" container (RAN level of 3.3 ppm) under the conditions of its intended use. *See* Salame Affidavit, note 16 *supra*; Monsanto Memorandum, note 15 *supra*, at 11.

21. *See Investment Co. Institute v. Federal Reserve System*, 179 U.S.App.D.C. 311, 322, 551 F.2d 1270, 1281 (1977).