

7- VC-Reliance

October 14, 1978

MEMORANDUM TO THE PVC SAFETY GROUP

SPI

Re: Enforcement of the National Emission Standard
for Vinyl Chloride Against Owners or Operators
of Plants With Relief Valve Discharges

I. Introduction

The National Emission Standard for Vinyl Chloride (the "Standard"), 40 C.F.R. Pt. 61 (1977), was promulgated by the Environmental Protection Agency ("EPA") on October 21, 1976¹, pursuant to Section 112 of the Clean Air Act as amended, 42 U.S.C. § 7412. The Standard became effective immediately upon promulgation, but so far as we are aware all sources received waivers from EPA permitting delayed compliance. By the terms of the statute the waivers will expire on October 20, 1978. 42 U.S.C. § 112(c)(1)(B)(ii).

Our previous legal memorandum analyzed the general problems that could result from non-compliance with the Standard.² EPA recently has explained its overall enforcement

¹41 Fed. Reg. 46560-73 (1976).

²Beveridge, Fairbanks & Diamond memorandum "Enforcement of the National Emission Standard for Vinyl Chloride," dated June 30, 1978.

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policy with respect to the Standard in a September 18, 1978 memorandum.³ Both of these memoranda have been circulated to the PVC Safety Group. This memorandum will (1) outline EPA's enforcement policy with respect to relief valve discharges at facilities covered by the Standard, (2) review the history of the relief valve discharge provisions, and (3) if the members decide that the PVC Safety Group should attempt to change EPA's enforcement policy in this area, recommend that representatives meet with EPA's enforcement staff as soon as possible.

II. The Existing Standard and EPA's Enforcement Policy

The Standard prohibits all relief valve discharges to the atmosphere, except for so-called "emergency" discharges which could not have been avoided.

Except for an emergency relief discharge, there is to be no discharge to the atmosphere from any relief valve on any equipment in vinyl chloride service. An emergency relief discharge means a discharge which could not have been avoided by taking measures to prevent the discharge.⁴

³EPA Memorandum "Enforcement of NESHAPs Vinyl Chloride Standard Against Sources That Will Not Meet The October 21, 1978, Waiver Deadline" from the Director, Division of Stationary Source Enforcement to the Directors of the EPA regional enforcement divisions, September 18, 1978.

⁴40 C.F.R. § 61.65(a). This provision of the Standard would not be affected by the amendments to the Standard that were proposed by EPA on June 2, 1977 and that still are pending. See 42 Fed. Reg. 28154-59 (1977).

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The current enforcement policy set by EPA's Division of Stationary Source Enforcement with respect to relief valve discharges has two central features. First, EPA will consider a relief valve discharge as an "emergency" one only if it resulted from an "unpreventable disaster". Other discharges, including those resulting from operator error or inadequate backup equipment, will be viewed as violations of the Standard.

A relief discharge will be considered an emergency discharge only if it occurs as the result of an unpreventable disaster (i.e., tornado, hurricane, earthquake, flood, riot, sabotage, etc.). Discharges which could have been prevented through the use of backup equipment and/or proper operation and maintenance procedures will be considered violations of § 61.65(a). Some examples of conditions under which discharges will be considered violations include power outages, operator errors, preventable equipment failures and malfunctions, etc. In these instances, vinyl chloride releases could be avoided through use of backup power supplies, backup equipment, employee training, and proper operation and maintenance procedures.

Second, EPA will take mandatory enforcement action under Section 113 of the Clean Air Act with respect to each relief valve discharge which is not an "emergency" one under the above interpretation.

A non-emergency relief valve discharge of vinyl chloride constitutes grounds for EPA enforcement action in the form of immediate compliance orders. These should then be followed for subsequent violations with civil or in some cases criminal

⁵ EPA Memorandum "Vinyl Chloride Relief Valve Discharges" from the Director, Division of Stationary Source Enforcement to the Directors of the EPA regional enforcement divisions May 18, 1978.

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action. DSSE is taking the position that, as a matter of policy, all violations of § 112 require mandatory enforcement action by EPA. Henceforth, all non-emergency discharges, as well as other NESHAP violations, will require action under § 113 of the Act.⁶

EPA apparently intends to issue administrative compliance orders after the initial violation by a source, and will consider civil or criminal action against later violations.⁷

III. The History of the Relief Valve Discharge Provisions

The originally-proposed vinyl chloride standard also prohibited all non-emergency relief valve discharges. The proposed definition of what would constitute an "emergency" discharge, however, was slightly different from the definition finally adopted.

⁶Id.

⁷EPA's September 18, 1978 enforcement memorandum indicated that administrative orders would be issued only where a source can and will comply within 30 days after issuance of the order and no later than November 20, 1978. It is not clear whether or not EPA believes that criterion is consistent with its earlier May 18, 1978 policy on relief valve discharges.

The extent of EPA's authority to proceed administratively, rather than commencing civil or criminal enforcement action, is discussed at pages 4-9 of our June 30, 1978 legal memorandum to the PVC Safety Group. (Cited in footnote 2).

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Except for an emergency relief discharge, there is to be no discharge to the atmosphere from any relief valve or any equipment in vinyl chloride service. An emergency relief discharge means a discharge which could not have been avoided by taking all⁸ available measures to prevent the discharge.

The Federal Register preamble to the originally-proposed standard explained the Agency's rationale for proposing these requirements, and specifically stated that operator error would be considered preventable.

A zero emission limit is being proposed for relief discharges which can be prevented. In most cases, such discharges from reactors can be prevented by measures including, but not limited to, properly instrumenting the reactors to detect upset conditions, injecting chemicals to stop the polymerization reaction during upset conditions, venting the reactor contents to a gasholder during upset conditions and ultimately to a recovery system, providing employees with improved training on preventing and handling upset conditions, and utilizing a stand-by source of power. For other pieces of equipment, increasing pressure due to inert gases in the system can be relieved by manual venting to a gasholder 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. Discharges which cannot be avoided by taking such preventive measures, such as those caused by natural disasters, will not be in violation of the proposed standard if the owner or operator notifies EPA within 10 days concerning the nature and cause of the discharge. This notification provision is necessary to permit EPA to investigate the surrounding conditions and

⁸Proposed § 61.65(a), 40 Fed. Reg. 59545 (1975) (emphasis supplied).

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determine whether the discharge could have been prevented. For the purposes of the proposed standard, operator error is considered to be preventable.

Additional discussion on preventing relief valve discharges was contained in EPA's Standard Support Document. EPA concluded that "[a] combination of proper instrumentation to detect upset conditions, gasholder, and automatic inhibitor solution system can eliminate vinyl chloride lost from this source in existing plants."¹⁰

During the subsequent regulatory proceedings, SPI and individual companies commented on the proposed standard, including the relief valve discharge provisions. EPA responded to some of the comments on the proposed relief valve discharge provisions in the following way:¹¹

⁹ Preamble to proposed vinyl chloride standard, 40 Fed. Reg. 59539 (1975) (emphasis supplied).

¹⁰ Standard Support and Environment Impact Statement: Emission Standard for Vinyl Chloride, EPA-450/2-75-009 (October 1975), § 4.6, p. 4-31.

¹¹ Standard Support and Environmental Impact Statement Volume 2: Promulgated Emission Standard for Vinyl Chloride, EPA-450/2-75-009b (September 1976), § 2.4.5, pp. 2-47 through 2-50.

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- In response to a comment on whether operator error is preventable, EPA stated:

"Whether an operator error will be considered preventable or not will have to be decided on an individual basis depending on the surrounding circumstances. Examples of preventable operator errors would be errors due to lack of training or negligence."
- In response to a comment on methods of eliminating discharges EPA stated that it was "concerned only that these discharges are eliminated." In response to another comment, however, EPA indicated an awareness that some valves discharge more frequently than others and explained that "the goal of the standard is to prevent all discharges."
- In response to a comment contending that 13 listed process control and other features in a facility would be sufficient to meet the "all available measures" provision, and suggesting that EPA only require measures to prevent the "significant likelihood" of a discharge, EPA stated:

The [s]tandard has been revised by deleting "all available" measures. EPA has listed several methods which it expects a plant to take in preventing discharges. EPA's primary concern is that the discharges are prevented. If a company has alternate methods which do prevent discharges, these are acceptable to EPA.

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As quoted on page 2 above, in the final Standard EPA modified slightly the definition of "emergency" discharges to be those that "could not have been avoided by taking measures to prevent the discharge."¹² The proposed language that required taking "all available" measures was dropped.¹³

IV. Conclusions and Recommendation

Based on the history of the relief valve discharge provisions, we conclude that the definition of "emergency" in the May 18, 1978 memorandum by the Division of Stationary Source Enforcement is too narrow, and may be more stringent than was intended by the Agency when it promulgated the Standard. The May 18 memorandum apparently does not recognize

¹²40 C.F.R. § 61.65(a).

¹³The final standard also included a provision for "manual vent valve discharges" in § 61.64 of the Standard, applicable to polyvinyl chloride plants. That provision, which had not been in the proposed standard, prohibited manual vent valve discharges other than emergency ones, and defined "emergency" in the same language that is in the "relief valve discharge" provision. The Federal Register preamble explained that in some cases when several reactors would be out of control at one time there might be insufficient holding capacity in gasholders for all the contents, and concluded: "Therefore, where all other measures to prevent relief valve discharges have been exhausted, manual venting will be permitted as a last resort before the relief valve opens". 41 Fed. Reg. 46562 (1976).

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that the "all available" measures language was proposed and deleted, does not reflect the Agency's earlier decision to consider on a case-by-case basis whether a particular operator error was preventable, and indicates that enforcement action must be taken with respect to all discharges not included in the latest interpretation of "emergency".

Accordingly, since we understand relief valve discharges may pose a potential problem, we recommend that SPI meet with the EPA enforcement staff to attempt to convince the Agency to change the current enforcement approach.

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

MAY 18 1978 RECEIVED OCT 6 1978

OFFICE OF ENFORCEMENT

MEMORANDUM

SUBJECT: Vinyl Chloride Relief Valve Discharges

FROM: Director,
Division of Stationary Source Enforcement

TO: Directors,
Enforcement Divisions
Regions I - VI, and IX

By memorandum of February 28, 1978, I outlined the conditions under which relief valve discharges would be considered "emergency" discharges. In view of the continuing occurrence of non-emergency discharges and the upcoming close of the statutory waiver period (October 20, 1978), I would like to reiterate DSSSE's position on this issue.

A relief discharge will be considered an emergency discharge only if it occurs as the result of an unpreventable disaster (i.e., tornado, hurricane, earthquake, flood, riot, sabotage, etc.). Discharges which could have been prevented through the use of backup equipment and/or proper operation and maintenance procedures will be considered violations of §61.65(a). Some examples of conditions under which discharges will be considered violations include power outages, operator errors, preventable equipment failures and malfunctions, etc. In these instances, vinyl chloride releases could be avoided through use of backup power supplies, backup equipment, employee training, and proper operation and maintenance procedures.

A non-emergency relief valve discharge of vinyl chloride constitutes grounds for EPA enforcement action in the form of immediate compliance orders. These should then be followed for subsequent violations with civil or in some cases criminal action. DSSSE is taking the position that, as a matter of policy, all violations of §112 require mandatory enforcement action by EPA. Henceforth, all non-emergency discharges, as

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well as other RESHAP violations, will require action under §113 of the Act.

Through discussions with some of the Regional Offices, it has also been brought to our attention that certain vinyl chloride sources are finding it necessary to replace ruptured or leaking rupture disks on relief valves as many as 2-3 times per day. Some of these sources feel that they are emitting more vinyl chloride during the replacement of these disks than they would emit if their relief valves were not required to be equipped with rupture disks. Since the purpose of the rupture disk requirement (§61.65(b)(4)) is to minimize emissions of vinyl chloride and since most sources have been able to do so, we suggest that the sources in question may be using disks that do not meet the specifications of the relief valves under which they are installed. That is, the disks may be rupturing at a much lower pressure than the pressure setting of the relief valves. Sources that are experiencing such difficulties should be urged to look into different types and pressure settings of rupture disks. If this problem is occurring in your region, I would appreciate a thorough investigation into the cause of the problem and the formulation of a solution.

Should you have any questions on the issues discussed in this memorandum, please contact Libby Scopino (755-2564) of my staff.

William F. Johnson
for Edward E. Reich

cc: Don Goodwin
Jack Farmer
Susan Wyatt
John Courcier
Marcus Kantz
Abel Ferdas
Jim Wu
Bruce Varner
Martin Brittain
Ray Seid
Ron Naveen

GENC016931

ENVIRONMENTAL PROTECTION AGENCY

FEB 28 1978

MEMORANDUM

SUBJECT: Relief Valve Discharges from
Equipment in Vinyl Chloride Service

FROM: Director
Division of Stationary Source Enforcement

TO: Directors, Enforcement Divisions
Regions I, III-VI & IX

It has recently come to our attention that a number of plants subject to the vinyl chloride regulations are experiencing relief valve discharges which are not due to "emergency" conditions. As discussed in §61.65(a) and in the preamble to the proposed regulations, an "emergency" relief valve discharge is a discharge which could not have been prevented, such as a discharge occurring as a result of a natural disaster.

According to this strict definition of what constitutes an "emergency" relief discharge, any plant which has experienced a relief discharge which could have been prevented by back-up equipment and/or proper operation and maintenance procedures has violated §61.65(a). Such a plant may be required by EPA to implement measures designed to prevent future relief discharges.

The attached memo to Region II outlines various alternatives that may be used to require a plant to implement such preventative measures. In order to maintain national consistency in dealing with this matter, we request that the Regions follow the recommendations outlined in the attached memo for requiring installation of equipment and/or establishment of operation and maintenance procedures to prevent relief discharges.

Please note that simply reporting a discharge within the required 10 days does not relieve a source of any responsibility for violating §61.65(a).

CONCURRENCES

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If you have any questions or comments, feel free to
contact Libby Scopino at FTS 755-2564.

Edward E. Reich

Attachment

cc: Susan Wyatt
Stuart Roth (w/out attachment)
Marcus Kantz (w/out attachment)
John Courcier - Region I
Abraham Ferdas - Region III
James Wu - Region IV
Bruce Varner - Region V
Martin Brittain - Region VI
Ray Seid - Region IX

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

FEB. 23 1978

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 acceptable to EPA.

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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.

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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. Johnson
for Edward E. Reich

cc: Susan Wyatt, ESED
Marcus Kantz, Region II

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