



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

SEP 28 1984

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R&S 029881

Mr. W. C. Holbrook
BF Goodrich
6100 Oak Tree Boulevard
Cleveland, Ohio 44131

Dear W.C.:

I would like to take this opportunity to thank you for your recent comments on behalf of the Vinyl Institute and BF Goodrich regarding the recommended revisions to the national emission standard for vinyl chloride. We carefully reviewed your comments and prepared a response addressing all of the concerns raised at the August 30 meeting of the National Air Pollution Control Techniques Advisory Committee (NAPCTAC). A memorandum outlining our position and the anticipated changes based on the recommendations is attached for your information.

We look forward to a continuing dialogue and are prepared to answer any questions about the attached materials during our tentative meeting with Vinyl Institute representatives. Otherwise, if we can be of assistance to you, please call Mr. Fred Dimmick at (919) 541-5578 or me at (919) 541-5571.

Sincerely,

Jack R. Farmer
Director
Emission Standards and
Engineering Division

cc: John T. Barr, Air Products
and Chemicals, Inc.
James W. Kachtick, Tenneco
Polymers, Inc.
Joseph Ledvina, Vista Chemical
Company
NAPCTAC Members

RADIAN

CORPORATION

MEMORANDUM

DATE: September 5, 1984

TO: Fred Dimmick, Standards Development Branch

FROM: Karen Fidler, Radian

SUBJECT: Vinyl Chloride Review - Response to Comments Made at NAPCTAC

PURPOSE

On August 31, 1984, a meeting was held between representatives of the Chemicals and Petroleum Branch, Standards Development Branch and Radian to discuss the comments made during the August 30, 1984, National Air Pollution Control Techniques Advisory Committee (NAPCTAC) meeting and to concur on a position to be taken in responding to these comments. This memorandum summarizes the results of the meeting.

OUTLINE OF RESPONSE

Comment: The recommended revision to the definition of "in vinyl chloride service" is too restrictive and unnecessary.

Response: The intent of the revision was to place the burden of proving whether equipment is in vinyl chloride service on plant personnel and not on enforcement personnel. This position is reasonable and consistent with the recently promulgated standard for benzene equipment leaks. However, the revision was not intended to include equipment not originally intended to be included in the current definition. We will review the language in the revised definition to assess whether it is restrictive and, if needed, we will revise the definition.

Comment: No justification was provided for the revision to the definition of "ethylene dichloride purification" and particularly for inclusion of storage tanks in the definition.

Response: The revision to the definition was not intended to broaden the existing definition but was intended to clarify the definition because certain plants had misinterpreted what equipment was covered. The existing definition was intended to include inprocess storage tanks (where vinyl chloride may be present) and not final product storage tanks (where vinyl chloride is not expected to be present). The reason for the revision will be added to the preamble. (Meanwhile, the BF Goodrich representative indicated that he would submit information on the vinyl chloride content of liquid ethylene dichloride and vapor space in storage tanks that might, in his opinion, be regulated by the revised definition as written. The purpose of this submittal is to help us clarify which tanks in fact we intended to be covered by the standard.)

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Comment: The revision to the definition of "vinyl chloride purification" should not include the phrase "prior to sale or transfer off-site" since some facilities use the vinyl chloride product on-site to produce PVC.

Response: The phrase "prior to sale or transfer off-site" will be deleted from the definition.

Comment: Inclusion of "other pressure control systems" in the revision to the definition of "relief valve" could be misinterpreted and misapplied to systems such as emergency shortstop systems and refrigerated water systems.

*Their intent
as to include
normal &
emergency
PSP's.* Response: The revised definition is not intended to include emergency shortstop or refrigerated water systems. The proposed revision will be reviewed and clarified to reflect the intended definition and to avoid misinterpretation.

Comment: Changes to the wording of the 10 ppm requirements should be clarified to make clear that combining of streams of less than 10 ppm vinyl chloride with streams of greater than 10 ppm prior to control is not prohibited.

Response: The standard intends that vinyl chloride in streams be reduced to less than 10 ppm by the use of an emission reduction control technique and not by the use of dilution. The changes to the 10 ppm requirements in the preamble and regulation will be reviewed and clarified as needed.

6 Comment: Revisions to §61.64(a)(1) appear in two places and are not consistent.

Response: This inconsistency will be changed appropriately.

7 Comment: The compliance method for in-reactor-stripping operations does not allow for averaging of reactor opening losses and stripping levels as allowed in the existing standard for nonreactor stripping operations. Averaging is necessary to achieve compliance.

Response: The compliance method for in-reactor-stripping operations does in fact allow averaging of reactor opening loss over the number of batches between openings (as is allowed in the existing standard for other reactors not used as strippers). Ways of modifying the method to allow averaging of stripping levels across in-reactor-strippers producing the same resin type are being investigated. The method to provide for averaging of stripping levels will likely be complex.

8 Comment: The revision to the relief valve discharge standard in §61.65(a) should be changed to: (1) specify that the requirements apply only to reactors "in vinyl chloride service"; (2) apply a single limit to

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all reactors in a plant rather than by resin type; and (3) provide a rounding procedure since there is no such thing as a fractional discharge.

Response: The revised relief valve discharge standard will be changed to specify that only reactors in vinyl chloride service are covered. The recommended numerical limits were determined by evaluating performance data on the basis of separate resin types and do not take into account any rounding of fractional discharges. The basis on which the recommended limits were determined is still considered appropriate; thus, no changes will be made to the format of the limits in response to these comments. X

3
Comment: Additional language should be added to §61.65(b)(7) to allow the destruction of unused portions of samples rather than require that they be returned to the vinyl chloride process.

Response: Additional language will be added to §61.65(b)(7).

4
Comment: Plant operators should be given the option of complying with the leak detection and elimination programs already in place or with the proposed requirements in Subpart V.

Response: The EPA believes it is appropriate to specify a routine leak detection and repair program for valves to be adopted by all plants with components in vinyl chloride service. As discussed in the preamble, this can now be done because experience in developing programs for other standards has occurred since the vinyl chloride standard was established. Plants who have programs in place that are equivalent or more stringent than the new requirements will be in compliance with the proposed revisions. Only plants with less stringent leak detection and repair programs will be required to alter their current procedures. This is consistent with the intent of the current standard which is to ensure that an effective leak detection and repair program is practiced by all plants.

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During the NAPCTAC meeting, the EPA responded to this comment by again asking if specific companies had programs in place that they considered to be better than the recommended program. Based on input by company representatives on their particular programs and the ensuing discussion, the EPA concluded that the recommended requirements for leak detection and repair are appropriate and are sufficiently flexible to allow plants with effective, existing programs to continue their existing program. *need language!*

Comment: In §61.67(h)(3), in reference to taking samples to determine that equipment is not in vinyl chloride service, the phrase "or the gas being combusted in the flare" seems unnecessary.

Response: The phrase "or the gas being combusted in the flare" is unnecessary and will be deleted.

Comment: As written, the revision to the reporting requirements in §61.70(a) specifies the dates for submitting semiannual and quarterly reports despite the fact that some plants are currently on different reporting schedules based on their original compliance dates. The proposed reporting requirements should include provision for continuation of these alternate reporting schedules.

Response: The revisions to §61.70(a) will include provision for plants with different reporting schedules to continue their current schedule.

Comment: Definitions for "exhaust gas", "leak" and "relief discharge" should be added to the regulation.

Response: Functional definitions for "exhaust gas", "leak" and "relief discharge" are being considered for inclusion in the regulation.

Comment: A numerical standard for incinerator emissions based on annual on-stream time for the incineration system is recommended.

Response: The current 10 ppm standard with a 3-hour averaging period is adequate to allow for brief incinerator bypasses due to malfunction. Based on the information received during the review study, we believe that a 10 ppm standard based on a 3-hour averaging period is achievable. Although we do not anticipate changing the requirements for add-on control devices, we are willing to evaluate any information on continuous performance of incinerators or other add-on control devices to assess whether the current requirements warrant changing. ✓

Comment: The requirement that resin slurry samples be analyzed within 24 hours should be modified to allow analysis within 120 hours (5 days) based on a study that showed no significant statistical difference in vinyl chloride content between samples analyzed with 24 hours and within 120 hours.

Response: The recommended modification will be considered after reviewing the referenced study. (The Vista Chemical Company representative agreed to supply a copy of the slurry sampling study.)

Comment: Relief valve discharges due to so-called "acts of God" such as sabotage, tornados, etc. should be exempted when determining compliance with the recommended numerical limits.

Response: Such an exemption is not appropriate in the regulation. The recommended numerical limits were determined on a basis that includes the possibility of these types of discharges. If unusual situations occur resulting in relief valve discharges, such discharges should be left to enforcement discretion. X

Comment: A de minimus exemption for small relief valve discharges (<100 lb) should be incorporated in the recommended changes to the relief valve discharge standard.

Response: A de minimus exemption can not be added because we lack a reliable, accurate method for measuring discharge quantities. X

Comment: In lieu of the previously recommended de minimus exemption for relief valve discharges under 100 lbs, it is recommended that all but two "hydroful" discharges per year from reactors be exempted. ✓

Response: The recommended numerical limits for relief valve discharges were determined by evaluating performance made up of all types of discharges, including "hydroful" discharges. Exempting hydroful discharges would require reevaluation of performance data and would result in different (lower) numerical limits for non-hydroful discharges. The current basis for determining the numerical limits is considered appropriate and no exemptions will be added. X

Comment: A multiple relief valve discharge incident from a single piece of equipment such as a reactor should be counted as a single relief valve discharge for purposes of determining compliance.

Response: In evaluating performance data to determine the recommended numerical limits, multiple discharges occurring simultaneously from a single piece of equipment were counted as one discharge. To be consistent with the basis of the recommended limits, the preamble and regulation will be clarified to specify that multiple discharge incidents from one piece of equipment can be counted as a single discharge in determining compliance. [Note that multiple discharge incidents from several pieces of equipment were counted separately in determining the recommended numerical limits and thus will be counted separately in determining compliance.]

Comment: As written, it is unclear how the recommended limit for relief valve discharges from EDC/VC plants is to be applied in a multiplant complex. The numerical limit for relief valve discharges from EDC/VC plants should apply to each independent production plant within a complex.

Response: In determining the recommended numerical limit for relief valve discharges from EDC/VC plants, it was recognized that certain plants operate more than one production plant in the same complex. In general, the compliance reports submitted by these multiunit complexes do not provide sufficient information to evaluate performance on a per unit basis. Furthermore, discharges from any equipment that is shared in a multiunit complex, such as storage tanks, are not automatically attributable to one unit. Consequently, the recommended limit was determined on the basis of evaluation of performance on a per complex basis rather than on a per unit basis. For this reason, the recommended limit applies to a complex and not to individual production units within a multiunit complex.