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New file: Env-ICO-
Baton Rouge, La)

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February 23, 1976

Emission Standards and Engineering Division
Environmental Protection Agency
Research Triangle Park
North Carolina 27711

2/23/76
poll

ATTENTION: Mr. Don R. Goodwin

Dear Mr. Goodwin:

In response to the EPA's invitation to comment on the proposed standard for Vinyl Chloride (40 CFR Part 61) Allied Chemical submits herewith its comments under the following headings:

- I EPA 40 CFR Part 61 - Preamble to Proposed Standards
- II EPA 40 CFR Part 61 - Proposed Standards
- III Standard Support and Environmental Impact Statement EPA 450/2-75-009
- IV Scientific Technical Assessment Report on Vinyl Chloride and Polyvinyl Chloride EPA 600/6-75-004

Allied Chemical's facility at Baton Rouge, Louisiana produces only EDC and VCM, therefore our comments are confined to proposals relating to this segment of the industry.

Very truly yours,

J. M. DeVoe
Manager
Air & Water Control

MCM/sm
Attachment

All polluting limits
6125-6233

ASI 00006125

General Comments

The issuance of the Proposed Standards for Vinyl Chloride represents a major accomplishment for the EPA. The scope and detail of technical input, participation by industry and opportunity for revision has far exceeded any previous proposals for control action. However, we do have some general and specific comments on the proposed standard.

Initially, we believe EPA has not adequately addressed the changes made by the industry to attempt to comply with OSHA requirements. Emissions have been drastically reduced so that no worker is exposed to average concentrations in excess of 1 ppm Vinyl Chloride Monomer in his work area. The impact of industry's action in this regard has not been considered. The EPA assumption that industry would meet the OSHA standards by venting Vinyl Chloride emissions to the atmosphere is not generally valid.

Fugitive emissions should not be covered in this regulation. The EPA should not undertake the responsibility to specify equipment changes within a plant to produce air quality levels external to the plant. How the standard is met should be left to industry.

I. EPA 40 CFR Part 61 - Preamble to Regulations

40 Fed. Reg. 59533

"EPA has concluded that ambient concentrations of vinyl chloride poses a public health risk and should not be allowed to persist until all information gaps are filled."

- As previously mentioned EPA has not evaluated the effect of the OSHA regulations upon the ambient air concentrations. Since the OSHA regulations went into effect, there has been a marked decrease in fugitive emissions. It is our suggestion that the EPA allow at least a year before final promulgation. During this period, new information could be developed under Section 114 of the Clean Air Act, 42 U.S.C.A. Section 1857c-9, to update the data obtained previously under Section 114.

40 Fed. Reg. 59535 - Rationale for the Emission Limits

- Workers in vinyl chloride plants and PVC plants are just as much a part of the population as the 4.6 million people who live near the plants. If OSHA allows 1 ppm TWA as safe to the health of the workers then likewise an ambient air concentration should be considered rather than an emission standard.

40 Fed. Reg. 59539 - Fugitive Emissions

"Leaks from seals on rotary pumps can essentially be eliminated by using double mechanical seals..."

- Use of a double mechanical seal pump with pressurized fluid between the seals cannot be used on vinyl chloride liquid because of the resultant contamination due to inleakage of the pressurized fluid. VCM quality is extremely important and contamination renders it unusable and unsaleable. If the circulating vinyl chloride liquid is maintained at a higher pressure than that of the fluid between the seals, the purpose of the proposed system is defeated. The double seal is actually not necessary because the amount of leakage is potentially so small as to be de minimis.

40 Fed. Reg. 59539 - Fugitive Emissions

"The proposed standard also includes equipment specifications requiring that leaks from relief valves be minimized by installing a rupture disc between each relief valve and the equipment served by the relief valve."

- The rupture disk prevents the relief valve from suffering premature lifting and also eliminates the chatter or sporadic relief that can occur when the vessel is near relief pressure and the valve doesn't reseat properly. However, when the rupture disk fails, pieces of the failed disk could more than likely wedge the relief valve open and cause relief valve failure. This, then, would cause the emission of more VCM than chattering or premature relief which can be cured by dropping system pressure.
- A dangerous situation will arise if the rupture disc slowly leaks vessel pressure into the space between it and the relief valve, thus effectively raising the relief pressure by 100%. Venting the space between the rupture disc and relief valve will avoid this situation, but creates another potential emission source.

40 Fed. Reg. 59539 - Fugitive Emissions

"The proposed standard would require capture and control of emissions of vinyl chloride bearing gases during manual venting from processing equipment."

- We suggest that manual venting to the atmosphere from process vessels or storage tanks be permitted in extreme emergencies where containment is not logically possible and massive sudden release from relief valves might lead to a more hazardous condition.

II. EPA 40 CFR Part 61 - Proposed Regulations

40 CFR Section 61.60, 40 Fed. Reg. 59544

- We recommend that section 61.60 be amended to specifically exempt R&D and quality control facilities using test equipment up to 500 gallons in size.

Emissions from these sources are quite insignificant when compared to total industry emission. A formal leak detection and elimination procedure with this size of equipment would be burdensome. OSHA guidelines would adequately protect workers operating this equipment and resulting emissions from any such facility would not be significant.

40 CFR Section 61.62, 40 Fed. Reg. 59545

- 10 ppm maximum vinyl chloride emission limits from the low volume EDC and VCl stacks are not realistic. To get down to 10 ppm would require at a minimum the use of carbon absorbers. Since EPA uses a cost benefit ratio to justify the 0.02 lbs/100 lbs. of product for the oxy-chlor stack, it seems more realistic to apply this same weight standard to all of the stacks.

40 CFR Section 61.65, 40 Fed. Reg. 59545-59547

Emission Standard for Ethylene Dichloride Vinyl Chloride and Polyvinyl Chloride Plants

- In 61.65 (b) (i) and in several other sections, the wrong conversion factor has been used to convert liters to gallons. The correct ratio is 3.8 liters/gallon, not 4.1.

61.65 (b) (7)

The word "no" in this paragraph is inappropriate and impossible to enforce. We request that the paragraph be reworded to provide that unused portions of the samples be returned to process or to an abatement facility and that sampling procedures allow purging to a closed process system.

61.65 (b) (8)

- Preparation and submittal of a specific leak detection and elimination system within 45 days is a very short period. It should be extended to at least 120 days.
- The establishment of new monitoring points, assembling of equipment and training of laboratory personnel will require at least 4 months.

61.65 (b) (9) (i)

The first sentence could be interpreted to require stripping all waste streams separately. It is recommended that the sentence be changed to read:

"The concentration of vinyl chloride in each inprocess wastewater stream containing greater than 100 ppm vinyl chloride shall be reduced to less than 10 ppm before being mixed with any other inprocess wastewater stream which is 10 ppm or less, before being exposed to the atmosphere, before being discharged to a wastewater treatment process or discharged untreated as a wastewater."

40 CFR 61.66, 40 Fed. Reg. 59547-59548
Equivalent Equipment and Procedures

The proposed standard should allow the industry to employ test methods other than Test Method 106 for determination of vinyl chloride levels in stationary sources. Alternative equipment that provides data satisfactory to meet the level of proposed standards should be equally acceptable. An example of this instrumentation is a portable hydrocarbon detector which

assumes that all hydrocarbon vapors being tested are vinyl chloride.

40 CFR 61.67, 40 Fed. Reg. 59547-59548

61.67(c)

- Operation at maximum production rate for a test is sometimes not feasible. This should be changed to normal operating rate when all pieces of equipment are in service.

61.67(e)

- The last sentence of this paragraph should be amended to state: "The owner or operator shall report the determinations to the Administrator within 10 days following the determination."

40 CFR 61.68, 40 Fed. Reg. 59548 - Initial Report

To protect confidentiality, it is recommended that paragraph (c) be changed to read:

- "(1) A general description of the method used or the procedure adopted to insure compliance with the standard.
- (2) A description of the methods which are part of the standard operating procedure for measuring or calculating emissions under emission limits listed in 61.65 (b) (1) (i) and (b) (6) (i).
- (3) A statement that the equipment is installed and that each piece of equipment and each procedure is being used."

40 CFR 61.70, 40 Fed. Reg. 59549 - Record Keeping

- There is much too much documentation required by this section. The chromatograph sheets and operations logs would be sufficient to record all of the information required. This is especially true of the record keeping required for leak detection. The chromatograph will show the leaks and then return to normal conditions. The EPA would be informed that the leak was eliminated; it really does not need all the details proposed by this section.

61.70(a)

- Should be changed to read "(1) a record of vinyl chloride detector results at each location and a summary of the measurements which have exceeded the accepted definition of a leak."

Paragraphs (a) (1) (ii) and (a) (2) should be deleted.

40 Fed. Reg. 59550 - Method 106 - Determination of Vinyl Chloride from Stationary Sources

- This is an extremely cumbersome method. In the drawing on page 59550 valves should be provided for the sample bag; otherwise the method cannot be used.
- The Tedlar bags specified on this test are very expensive. It is recommended that Saran bags, which are perfectly adequate for the purpose, be allowed as substitutes.

III. Standard Support and Environmental Impact Statement
EPA-450/2-7-009

Page 3-5 - Paragraph 5

- The furnace tubes, industry wide, are not packed with pumice or charcoal. The tubes are empty to prevent coking acceleration.

Page 7-75 - Table 7-G

- Installed capital cost for control method 8 (incineration) applied to the oxychlorination process is shown as \$524,000. Allied Chemical's estimate for this installed capital is \$2,200,000.

Tables 7-24 Through 7-32

- "Plant Owner/Location" should list Allied Chemical as "Allied Chemical/Baton Rouge" not "Allied Chemical/Geismar."

Page 7-95 - Table 7-17

- Estimated capital requirements for the Allied Chemical/Baton Rouge 650 million pound per year EDC facility are significantly higher than reported in Table 7-17

	\$ 000		
	<u>Air</u>	<u>Water</u>	<u>Total</u>
Table 7-17	355	629	984
Current Allied Chemical Estimate	1,040	1,220	2,260

- 8-22 - "For the purposes of the proposed standard, operator error is considered to be preventable."

- This statement goes beyond normal legal responsibility based on negligence. A plant manager may be held responsible only if an operator is improperly trained. Errors in human judgment, however, are beyond complete prevention.

IV. Star Document EPA 600/6 - 75 - 004

1.14 Emissions

"VC loss estimates of approximately 4 percent have been reported, based primarily on material balance studies."

- This is believed to be a high value; most losses are believed to occur in the formation of by-products. An "unaccounted for" quantity amounting to 4% in a rapidly prepared material balance is readily ascribable to measurement error.

Table 4.1 page 41

- Production capacity reported for Allied Chemical of 155×10^6 kg/yr. is high. This should be revised to 143×10^6 kg/yr.