

SHELL OIL COMPANY

FC 2.4
(w/o ATTACHMENT)

DATE AUGUST 13, 1975

TO CHEMICAL MANUFACTURING
& DISTRIBUTION - MANUFACTURING
REPRESENTATIVE - R. L. BRUNNERFROM MANAGER - MANUFACTURING
ENVIRONMENTAL CONSERVATION
DEPARTMENT - HEAD OFFICESUBJECT DRAFT VINYL CHLORIDE
EMISSION REGULATIONS

Attached is a copy of the most recent draft of the Environmental Protection Agency's proposed regulations for vinyl chloride. This draft has been reviewed by the EPA Administrator and approved by him on August 1, 1975 for issue to interested government agencies for review. Following this review (and any revisions,) the regulation will be proposed for public comment by publication in the Federal Register. We would expect this to occur about the end of September.

This draft contains many significant changes from the previous versions which have been reviewed by SPI and Shell, and appears to go a long way in meeting several of our earlier objections; however there may still be areas where further comment to the EPA - prior to publication - would be beneficial. As you will note, the EPA intends to proceed with the rulemaking procedure under Section 112 of the Clean Air Act by declaring VCM to be a "hazardous air pollutant." This decision by the Administrator raises serious legal questions which has been and will continue to be addressed by the legal counsel for the industry.

We would appreciate your review of this document and receipt of any comments you may have by September 2. Our comments will be consolidated with those of the other producers through the SPI technical review committee. We would especially welcome comments concerning the recordkeeping, monitoring and reporting requirements since these have just recently been added to the proposal.

By copy of this memorandum we are also requesting comments from Process Engineering, the Deer Park and Norco Plants, and the Business Center.

Original Signed By
R. E. VAN INGEN

R. E. Van Ingen

JAM:TAT

cc (w/ attachment)

Chemical Intermediates Business Center - Manager
Engineering - Products - Process Engineering - R. L. Robertson
Deer Park Manufacturing Complex - Environmental Conservation Superintendent
Norco Chemical Plant - Manager

01-Vc/pvc = 60V

September 8, 1975

Mr. John Lawrence
Society of Plastic Industry, Inc.
355 Lexington Avenue
New York, New York 10017

Dear John:

Attached are my comments and suggested revisions for the VCM draft standard which we discussed on September 3.

I find that I will not be available to visit with Don Goodwin on September 11 or 12, but can go on September 15, 16 or 17.

If you have any questions on these comments, give me a call.

Very truly yours,

Original Signed by J. A. Mullins

JAM/dp

J. A. Mullins
Manufacturing - Environmental
Conservation Department

Attachment

cc - Mr. Gary Eaise
Ruckelshaus, Beveridge, Fairbanks & Diamond
One Farragut Square So.
Washington, D. C. 20006

bc - Chemical Intermediates Business Center - Manager
Chemical Manufacturing & Distribution - Manufacturing Representative -
Resins, Intermediates & Oxygenated Solvents

Comments on July 29, 1975 Draft
Standard for Vinyl Chloride
(J. A. Mullins)

Part 61.60

pg. 56 (a) "The provisions of this subpart are applicable to the following stationary sources excluding any such sources which are operated for research and/or development purposes:"

Part 61.61

pg. 58 (m) Add the following sentence to definition, "This does not include any water used for purging and flushing of equipment which has met the requirements in 61.62 (a)(4)(iv), 61.62 (b)(3)(v) and 61.62 (c)(7)(v)."

pg. 58 (s) "Portable ----- with a sensitivity of at least 10 ppm."

Part 61.62

pg. 59 (a)(1) The standard should be applicable to waste gas streams vented during operation and should exclude such things as fugitive emissions and equipment opening which is covered under other sections. This could be done by defining "exhaust gases" in Part 61.61.

pg. 61 (iv) Due to the large number of purge valves that would have to be installed on very small pieces of equipment (and therefore be potential leak points), we suggest that this part exempt any equipment which is less than 10 gallons in size. Suggested rewording:

"Opening of equipment. Vinyl chloride ----- equipment which has a volume of more than 10 gallons and contains greater than 2 -----"

pg. 61 (iv)(A)(1) Do not specify method of removal. Also prefer to state that the intent is to reduce the quantity of VCM to 50% of its original level. Proposed rewording:

"If the volume of the ----- shall be reduced
by-vacuum-pump by 50%."

pg. 63 (b)(1) Same comment regarding exhaust gases as given above [(a)(1)].

Defining exhaust gas in 61.61 will handle this problem.

pg. 64 (d)(i)(A) One of the methods which will be used by industry to reduce VCM losses in loading is to eliminate or at least minimize the length of hoses used. An exemption from this rule for very small hoses or the space between "flange to flange" connections should be provided. Suggested rewording:

"Loading operation: ~~Immediately~~ After each -----
open to the atmosphere and are larger than 1 gallon
shall be ~~immediately~~ immediately after each -----

pg. 65 (v) Same comment and rewording as suggested for (iv) (page 61) above.

Part 61.63

pg. 74 (b)(1) Test Method 106 or approved equivalent

pg. 76 (iv) Certain existing incinerators were designed to operate at high excess air as a means of cooling. It is essential that the high excess (100% in the case of Shell) be maintained. It is punitive to require that some industries with this situation be potentially required to do a 500% better job of combustion than those who have or build an incinerator that can operate at the lower excess air. Suggested rewording:

"For those emission ----- vinyl chloride emissions
(except existing sources which were designed to
operate at higher excess air levels), the
concentration -----"

pg. 81 (1) This section requires that points on the multipoint VC detector which is being installed to detect fugitive emissions be used to measure the VC concentration in certain continuous emission sources. This can present serious problems in choosing the proper range of the instrument and in sample handling. It would be preferable to insert a new Subpart to the regulation which requires monitoring of these continuous emission streams by an appropriate analyzer. If this is done all the wording in (1) after "(c)(5)" can be deleted.

Part 61.65

pg. 84 (a)(1)(ii) This requirement may well result in the investigation and recordkeeping of insignificant increases in VCM concentration. In many cases two standard deviations will be tenths or even hundredths of ppm and caused by simple shifts in wind patterns. If there is a significant leak of VC, there will be a large increase in VC concentration. We suggest that the regulation be changed to read:

"Where the information required ----- exceeds
two standard deviations or 1 ppm, whichever is
greater from the mean -----"

pg. 85 (3)&(4) The log required by this section will be highly burdensome and will require significantly increased costs. We suggest that a standard procedure be established (approved by EPA). The approved procedure would also show that attainment of the required VC level is obtained if it is followed, thus eliminating the need to measure the VC concentration as now proposed. The operator would be required to complete a check sheet that will show it was done by the procedure. If the procedure is not used or in some way changed, then the data suggested could be recorded.

Original Filed by 1.

September 17, 1975

TO: Mr. J. A. Mullins

PROPOSED EPA STANDARD FOR VINYL CHLORIDE

I have the following comments for discussion with Don Goodwin of EPA. It should be recognized that we are commenting only on an unofficial draft. Therefore, it would be inappropriate to take a hard position in formal correspondence or publicize such a position. However, I think the SPI should make the following views quite clear to the EPA and should indicate to Goodwin that they would vigorously advance these opinions in public forum should the proposed standard issue as drafted. I think Shell should support the SPI in this endeavor with personnel and money.

We should secure copies of the following from EPA and comment on these documents as well. The documents cited in the draft are:

- A. "Standard Support and Environmental Impact Statement" (EPA - 45 - 75)
- B. "Scientific Technical Assessment Report on Vinyl Chloride and Polyvinyl Chloride"
- C. "The Evaluation of Environmental Carcinogens" Report by Ad Hoc Committee April 22, 1970.
- D. "OMB Circular A-107"

RATIONALE FOR REGULATING VINYL CHLORIDE
(Preamble to the Proposed Standard)

Comments collected internally within Shell have not addressed the preamble to the proposed standard. Vigorous opposition to the preamble is essential. It sets forth the premises, philosophy, and bases for the standard itself. As such it can become a precedent for the most onerous interpretation of the specific regulations and for other standards. Therefore, it is crucial that the preamble be correct and totally reasonable. Following are my comments on the preamble:

(1) Page 4. We should challenge vigorously the EPA judgment that VCM qualifies as a hazardous air pollutant according to Section 112. The toxicological evidence on page 4, 5, and 6 fails to consider significant positive evidence available and known to EPA showing that VCM does not cause the alleged ill effects in human beings at low exposure levels. It does not cite sophisticated animal studies showing the existence of a no-effects (during normal lifetime) threshold level. It further excludes mention of the

animal studies showing evidence for toxic metabolic pathways at high exposure levels and non-toxic metabolic pathways at low exposure levels. In short, the EPA cites only that evidence which supports a judgment that VCM meets the hazardous air pollutant criteria of Section 112. It does not cite existing evidence which supports a judgment that it would not be a hazardous air pollutant at the ambient concentrations now prevailing. As discussed with Goodwin before, the EPA approach is one of expedience taken only because it will be easier and quicker for them to regulate to 112 than to 109 or 111. The American public deserves an exposure of this oppressive philosophy.

(2) On page 5 the draft introduces unproven and inappropriate speculation that VCM is a potential mutagen.

(3) At the bottom of page 5 and continuing on page 6 the draft implies that other human disorders arise from occupational exposure to VCM, yet there is no evidence offered in support of this conjecture.

(4) On page 6 the draft indicates that reasonable extrapolation from the cited findings cause concern that present ambient levels may cause or contribute to the same or similar disorders. Such an extrapolation is not reasonable, not founded in fact, and is inappropriately speculative.

(5) In the middle of page 6 the EPA cite ambient monitoring results taken in the Spring of 1974. The data cited are seriously misleading on the following grounds:

The citation that persons are generally exposed to daily concentrations of less than 1 ppm is totally inappropriate. The preponderance of concentrations found were substantially below 0.1 ppm. Thus the draft plants the incorrect implication of a higher ambient concentration level than existed in fact. Also, the draft states there were occasional peak concentrations as high as 33 ppm. That statement is totally inappropriate since only 1 such concentration was found. The EPA should be required to cite the recent tests made of ambient concentrations found in the most recent studies. Owing to substantial improvements already made by industry, it is our understanding that the concentrations now prevailing are very substantially lower than those found earlier.

(6) Towards the bottom of page 6 the draft cites that for carcinogens there may be no adopted concentration which poses absolutely no public health risk. That statement is highly speculative. Further, the EPA should be required to validate their authority for setting standards which pose absolutely no risk. What is appropriate is the risk level which is acceptable to the public. I believe an indication of that risk level is given by the public response to the 55 mph speed and the willingness to forego the conservation of lives that has been shown to result from reducing highway speeds to that level.

(7) On page 7 and continuing on page 8, the draft introduces conclusions supported by the "Evaluation of Environmental Carcinogens" created by the "Ad Hoc" committee on April 22, 1970. The draft introduces those conclusions as though they were incontrovertible. At the top of page 8 it states that chemicals should be subjected to scientific scrutiny and considered potentially guilty unless and until proven innocent. That statement, if allowed to be retained could establish precedent leading to the shutdown of the entire chemical industry. There are hundreds of chemicals employed in everyday use for which there is no evidence of injury to humans nor is there any evidence specifically demonstrating their use in commerce would constitute absolutely no public health risk. To meet the requirements suggested in the Draft it would be necessary for industry to devote their total resources to animal testing of all compounds now in production. The resources do not exist to permit such an extensive testing program nor would industry be viable if all resources were devoted to that end. More significantly, the overall public welfare and national security would be jeopardized. Also, on page 8, the draft introduces as numbered item 3 the suggestion that all chemicals should be subject to carcinogenic bioassay employing 2 species, both sexes and adequate controls. Under such a requirement the test resources and costs would be especially exorbitant. There is no basis for accepting the views of such an Ad Hoc committee as a foundation for legislation. Such views should be admitted only upon the determination of the public via elected representatives after adequate exposure to adjudicatory public hearings.

(8) There is no scientific foundation for the statement numbered 4 page 8 that there is no level of exposure to a chemical carcinogen which should be considered toxicologically insignificant and that a safe level for man cannot be established.

The draft introduces improperly several judicial decisions which have not been adjudicated by the Supreme Court. It should not be accepted that because these decisions were not further challenged by industry (because of the cost of further challenge) or that because the Supreme Court declined to review certain decisions that the Supreme Court upheld such judgments.

(9) On page 9 in referring to the OSHA regulations the implication is introduced that the evidence was "quite sufficient" to merit such regulations. Such a statement is irrelevant to the circumstances surrounding ambient concentrations to which the general public may be exposed since such concentrations are very substantially lower than for the work force.

(10) On page 10 the draft states that it will be many years before useful epidemiological data will be available on the effects of lower acceptable exposure in response to the OSHA regulation. That statement is totally incorrect and misleading since epidemiological data already exists showing the absence of harmful effects at low exposure levels.

(11) The draft states that EPA has concluded that the available evidence indicates that ambient concentrations of VCM pose a public health risk. That statement is not founded in fact.

(12) On page 11 the draft introduces arguments as to why VCM should not be regulated under Section 109 or Section 111. The thrust of those arguments supports my premise that EPA are proceeding expediently rather than properly. No valid case is made for not regulating under Section 109 or 111. The EPA states, as though it were fact, that Section 109 is usually more appropriate for regulating pollutants whose presence in the ambient air is ubiquitous. Actually, the act itself suggests no such reservation.

(13) On page 12 the EPA introduces, as though it were fact, that VCM is a non-threshold pollutant. There is no evidence whatsoever supporting that conclusion. The statement that there may be no atmospheric concentration which poses no public health risk is again inappropriately made.

(14) On page 14 the draft offers an interpretation of Section 112 authorizing emission standards based on the use of best available control technology in cases involving apparent non-threshold pollutants. Such an interpretation founded on the fallacious non-threshold allegation has no basis for admission whatsoever in the Clean Air Act which is silent with respect to best available control technology and non-threshold pollutants. Therefore, the interpretation has no support in the law.

(15) On page 15 recognition is given to the fact that Section 112 does not provide for consideration of technology in standard setting. Nevertheless, the Administrator goes on to support such an interpretation on the basis of his belief as to what was the intent of Congress. It is totally inappropriate for an appointed administrator to regulate on the basis of his own personal interpretation of Congressional intent particularly when that intent has not been addressed in the enabling legislation. Such determinations can only be made by Congress.

(16) On page 22 the EPA cites data obtained from plant visits, consultations with industry representatives, control vendors on emission testing and two studies under contract as support for the reasonableness of the proposed controls. EPA should be required to introduce into the public record the information obtained. The public deserves an exposure to the ridiculous basis of the estimates given by vendors as to costs. The public deserves to know that industry's validated experience was neglected in deference to data supplied by the vendors showing the costs should be substantially lower than industry experience shows to be the case.

(17) On page 23 the EPA cites incineration tests. Again EPA should be required to introduce details of that test into the public record. The record should show that the incinerator test was on a very small scale and relevant only to the disposal of hydrocarbon rich streams and not applicable to the incineration of streams with a preponderance of inert gas which would not support combustion without added fuel.

(18) On page 25 and 26 arguments are made as to the cost/benefit ratio of the incinerating oxychlorination vents. The draft recognizes the impracticality of incinerating very dilute streams but on page 26 indicates that it would be appropriate for vents continuing VCM in the upper end of the range of 1.2 to 103 lbs/hr. The merits of that judgment need to be considered more in the context that oxychlorination vents constitute (according to the draft) only 8% of 10% or .08% of the total VCM emissions. It should be recognized however, that industry is installing equipment which will limit that emission to levels probably below 25-50 lbs/hr.

(19) On page 27 at the top the EPA seeks to set the ugly precedent that as technologies are developed which use less energy for controlling the oxychlorination process, the Administrator plans to evaluate the desirability of proposing standards which would require additional control. Such a suggestion should not be admitted particularly when there is no evidence that existing levels constitute a source of risk to the public health. What the draft advances is the concept of tighter control whether beneficial or needed or not.

(20) On page 35 the draft exempts discharges which cannot be avoided such as those caused by natural disasters. This exemption is much too narrow and will enable the EPA to adjudicate each relief valve discharge. Some limits should be placed on the magnitude of the discharge which must be reported to avoid extraordinary burden of reporting and government investigation. It would seem reasonable and safe enough to exempt discharges from reporting unless they gave rise to concentrations in the ambient atmosphere exceeding say 24 ppm-hours for any one day.

(21) On page 38 the draft would grant extensive powers to the administrator for approving leak detection programs. Also it should be made clear that a sequential multi point VCM detector should be acceptable. Otherwise we are pushed for continuous monitoring of each point.

(22) Beginning on page 53 the draft presents a completely superficial treatment of impacts. The statement is made that the cost of the standard will not tend to be sufficient of and by itself to cause an adverse economic impact to accrue to any average size VCM plant. However, the problem is that proliferation of such regulations and controls where they are unnecessary would lead to a major waste of national resources and a major impact on the public welfare and economy. The point needs to be made that controls which are well beyond adequacy are a waste of our national resources.

THE PROPOSED STANDARD

Following are my comments on the proposed standard itself. Indication is given where they differ from comments by J. A. Mullins.

- (1) Agree with Mullins' suggestion page 56 (a).
- (2) Note that in item 61.61 (c) page 56 the definition of reactor would exclude VCM plant reactors. However, I would leave it as is.
- (3) Item 61.61 (m) page 58. Agree with Mullins' comment.
- (4) Item 61.61 (s) page 59. Mullins suggests a sensitivity of 10 ppm. I would thus think this would be unacceptable or inadequate. Perhaps a precision of plus or minus 1-2 ppm would be O.K.
- (5) Item 61.62 (a) (1) page 59. The description would apply to an oxy vent as it is written. This should be clarified. I agree with Mullins' comment on this item.
- (6) Item 61.62 (a) (2) page 59. The specification of .02 kg/100 kg needs to have a time limit attached to it. Perhaps 24 hours would be appropriate.
- (7) Item 61.62 (a) (4) (iii) page 60. Clarification is needed on what is meant by "manually vented". How does this differ from other vents? Would it apply to the oxy vent?
- (8) Item 61.62 (a)(4) (iv)(A)(1) page 61. I agree with Mullins' comment. However, I doubt they would accept a 10 gallon size. I think it better stated as is (e.g. pressure). A 50% reduction would attract objections as seeming too small. As stated it may remain obscure. I do have a question if we can satisfactorily achieve that reduction, particularly if we can achieve it by vacuum or by means of purged gas. How do we handle purged gas volume after condensation; by incineration?
- (9) Item 61.62 (a) (4) (v) page 62. The draft should show that a sequential multipoint detector is adequate. In this same section in the middle of the page, I have tremendous concern over the judgmental liberty the Administrator would have on approving leak detection programs. As stated he would have the power to shut us down either intentionally or unintentionally by red tape and procrastination.

- (10) Item 61.62 (b) (1) page 63. As stated this provision would include the oxy vent. It covers all exhaust gases from any equipment for vinyl chloride formation or purification.
- (11) Item 61.62 (b) (3) (i) (A) page 64. Can we meet the loading operation as specified? How do we handle the purge gases? Mullins' suggestion on Page 64 would be acceptable.
- (12) Item 61.62 (b) (3) (iv) page 65. Again what is meant by "manually vented"? Needs clarification.
- (13) Item 61.62 (b) (3) (vii) page 66. Again I have a great problem with the judgmental discretion allowed the Administrator for program approval. Here again a sequential analyzer should be made explicitly acceptable.
- (14) Item 61.63 (b) (1) (i) page 75. This is a particularly ridiculous section and must be changed. The problems with always testing when operating at or above maximum loading rate should be obvious.
- (15) Item 61.63 (b) (1) (iv) page 76. This section is also critical and I agree with Mullins' comment. There should be an allowance for those who use excess air. Perhaps they could admit an adjustment for air supplied in excess of 1.1 times the theoretical amount to consume the contained hydrocarbon. I also would like to know if our people have checked the calculation and find it otherwise appropriate both here and in the following section continuing on page 77.
- (16) Item 61.63 (b) (2) (ii) page 78. Again we have the impractical requirement to make the test when equipment is operating at or above maximum loading rate.
- (17) Item 61.63 (b) (3) (i) page 78. Again we have a most impractical requirement that emissions be measured from all process equipment simultaneously. This must be changed. It simply is not practical. Continuing on page 78 we have also the impractical maximum production rate test requirement under Item 61.63 (b) (3) (ii) (A).
- (18) Item 61.63 (b) (4) page 79. Here is another most impractical requirement. The owner may give the required notice period and by the time the observer shows up, equipment might be operating at below the required rate.
- (19) Item 61.64 (b) Page 80. I question if it is practical to submit the information required every 180 days.
- (20) Item 61.64 (b) (1) page 81. Another most impractical requirement, particularly if it is required to report excursions above two standard deviations.

- (21) Item 61.65 (a) (1) (iv) page 84. This is a totally impractical requirement as we have discussed. It should be limited say, to excursions exceeding two standard deviations or 1 ppm whichever is greater. Coupled with the reporting requirements this would be an onerous burden to the government and to the industry to administer.
- (22) Item 61.65 (a) (2) (i) page 85. Again a most critical and burdensome requirement. It implies all concentrations at all places. This and the following Item (ii) and 61.65 (a) (3) are an extreme and impractical burden. Again, I would suggest the report be exempted unless the concentrations exceed, say, 10 ppm. Perhaps Mullins' suggestion on this section is also helpful.
- (23) Item 61.65 (a) (4) page 86. This seems to me to be an excessive requirement.
- (24) I hope our folks have checked method 106 and method 107 and will supply comments as to their validity.

RJR:lhg
9/17/75

cc: K. L. Spalding