

6-77 for JMD-7012

ALLIED CHEMICAL CORPORATION

MEMORANDUM

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TO:	WORKS	Industrial Chemicals Division
FROM:	PRODUCT	Edwards Division
SUBJECT:	TICKLE	
	RET. TO	

--- Preliminary Guidelines for Compliance with
Vinyl Chloride Occupational Health Standard

Subject to modification as we develop experience, we will observe the following guidelines for compliance with OSHA standard 1910.93q which becomes effective January 1, 1975:

B.1 Action Level - "Action Level" means a concentration of vinyl chloride of 0.5 ppm averaged over an 8-hour work day.

The standard does not make it clear whether the action level means any one 8-hour day, or a typical 8-hour day. With respect to operating areas, we will consider it to mean any 8-hour day.

B.5 Emergency - "Emergency" means any occurrence such as, but not limited to, equipment failure, or operation of a relief device which is likely to, or does, result in massive release of vinyl chloride.

We will interpret this literally as meaning equipment failure or operation of a relief device by extending the definition of equipment failure to include vessel or pipeline failure.

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B.6 Fabricated Product - "Fabricated Product" means a product made wholly or partly from polyvinyl chloride, and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride resulting in the release of vinyl chloride.

This exclusion hypothetically does not cover such activities as maintenance or construction welding of PVC. Until we receive further guidance, we will assume that PVC welding when done occasionally under field conditions

does not automatically bring the operation under the standard. However, shop welding, if conducted over a period of four hours or more, will either require monitoring of the individual's work atmosphere, or the wearing of air-supplied respirators.

- B.7 Hazardous Operation - "Hazardous Operation" means any operation, procedure, or activity where a release of either vinyl chloride liquid or gas might be expected as a consequence of the operation or because of an accident in the operation, which would result in an employee exposure in excess of the permissible exposure limit.

In the monomer and film plants we believe that this definition should be limited to activities involving tank or vessel entry and to loading and unloading liquid vinyl chloride.

C.1 and C.2 Permissible Exposure Limit

1. No employee may be exposed to vinyl chloride at concentrations greater than 1 ppm averaged over any 8-hour period, and
2. No employee may be exposed to vinyl chloride at concentrations greater than 5 ppm averaged over any period not exceeding 15 minutes.

It has been pointed out that, in the absence of continuous monitoring, it is impossible to establish with certainty whether or not a given individual has been exposed to concentrations in excess of 5 ppm over a brief time period such as 15 minutes. Bearing in mind that this is a problem for both ourselves and the Compliance people, we will assume for the time being that, if the individual's exposure over 8 hours is 1 ppm or less, the ceiling is also being complied with. Our inability to comply with the ceiling, would then become a matter for the Compliance Officer to demonstrate with his monitoring equipment.

- D. Monitoring - Because of the length of the text, we refer you to the Standard.

It will be our procedure to apply this section literally. Please note that this reference is to exposure of specific employees, hence personal monitoring is the preferred method. Area or grid monitoring may be used once it has been established that the results are consistent with personal monitoring data.

E. Regulated Area -

1. A regulated area shall be established where:
 - (i) Vinyl chloride or polyvinyl chloride is manufactured, reacted, repackaged, stored, handled or used; and
 - (ii) Vinyl chloride concentrations are in excess of the permissible exposure limit.
2. Access to regulated areas shall be limited to authorized persons. A daily roster shall be made of authorized persons who enter.

Monitoring studies may establish that either or both plants are generally below the action level, except when certain activities are being performed, or alternately that exposures in excess of the permissible level are confined to a specific portion of the plant; e.g. exposures at Pottsville may exist only while trucks are being unloaded. It is also conceivable that exposures at Baton Rouge can, now or in the future, be limited to loading and unloading operations involving liquid vinyl chloride. In such cases, and relying on the precedents established in the carcinogen standard, regulated areas may be temporary in nature and confined to certain small geographic boundaries. Under these conditions there should be an appropriate signal to indicate that the area is operating under regulated conditions, the outlines of the regulated area should be clearly marked, and unauthorized persons should be excluded.

- E.2 Daily Roster - Access to regulated areas shall be limited to authorized persons. A daily roster shall be made of authorized persons who enter.

Although we have been informally advised that OSHA had in mind a procedure involving employees' signing in or out of the area, practice has shown this to be unwieldy and unduly cumbersome in the case of regularly assigned employees. We believe that the intent of the regulation will be served equally well by procedures which derive such rosters from payroll or time distribution sources, and are prepared to defend this position.

- F.3 Written Plans - Written plans for such a program shall be developed and furnished upon request for examination and copying to authorized representatives of the Assistant Secretary and the Director. Such plans shall be updated at least every six months.

Particular attention is directed to this item. We have no desire to defend complaints of alleged non-compliance with other sections of the regulation if we are not in strict compliance with all recordkeeping requirements.

- G.1 Respiratory Protection - The employer shall provide a respirator which meets the requirements of this paragraph and shall assure that the employee uses such respirator, except that until December 31, 1975, wearing of respirators shall be at the discretion of each employee for exposures not in excess of 25 ppm, measured over any 15-minute period. Until December 31, 1975, each employee who chooses not to wear an appropriate respirator shall be informed at least quarterly of the hazards of vinyl chloride and the purpose, proper use, and limitations of respiratory devices.

Please note that over the first year the standard permits the wearing of respirators on a voluntary basis unless a ceiling value of 25 ppm is exceeded, and except during hazardous operations.

- G.4 (Please see standard)

We have informal information that the Table contained in G.4 will be revised in light of information which has more recently come to the attention of OSHA. We also have information that NIOSH has not yet certified any specific type of cartridge or cannister for vinyl chloride service. Pending clarification of this issue, we believe it appropriate that all personnel in the monomer plant, and those personnel in the film plant who have potential exposure to vinyl chloride, should be provided with personal half-mask respirators equipped with cartridges certified for organic vapors and acid gases. In addition, a reasonable number of full-face gas masks, with cannister meeting the above specification, should also be provided for emergency use at those points at which significant excursions may be anticipated.

- G.6 Air-Purifying Respirators - Where air-purifying respirators are used:

- (i) Air-purifying cannisters or cartridges shall be replaced prior to the expiration of their service life or the end of the shift in which they are first used, whichever occurs first; and
- (ii) A continuous monitoring and alarm system shall be provided where concentrations of vinyl chloride could reasonably exceed the allowable concentrations for the devices in use. Such system shall be used to alert employees when vinyl chloride concentrations exceed the allowable concentrations for the devices in use.

Please note that continuous monitoring and alarm systems are required only if the company elects to use air-purifying respirators or gas masks. It is not required if protection is provided by air-supplied units. Neither should it be confused with reporting requirements implied by Section D of the standard. (See below)

- I. Emergency Situations - A written operational plan for emergency situations shall be developed for each facility storing, handling, or otherwise using vinyl chloride as a liquid or compressed gas. Appropriate portions of the plan shall be implemented in the event of an emergency. The plan shall specifically provide that:
- (1) Employees engaged in hazardous operations or correcting situations of existing hazardous releases shall be equipped as required in paragraph (h) of this section;
 - (2) Other employees not so equipped shall evacuate the area and not return until conditions are controlled by the methods required in paragraph (f) of this section and the emergency is abated.

Note that a written emergency plan is required. This should be developed and on file before January 1, 1975.

- J. Training - Each employee engaged in vinyl chloride or polyvinyl chloride operations shall be provided training in a program relating to the hazards of vinyl chloride and precautions for its safe use.

We have been informally advised that it is not OSHA's intent that irrelevant items be included in a given employee's training program. However, if the employee's job indicates, omission of relevant material would become a violation. Please note again that training aids and written material must be maintained in a fashion suitable for compliance inspection and transmission to the Labor Department.

- K. Medical Surveillance - A program of medical surveillance shall be instituted for each employee exposed, without regard to the use of respirators, to vinyl chloride in excess of the action level. The program shall provide each such employee with an opportunity for examinations and tests in accordance with this paragraph. All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, and shall be provided without cost to the employee.

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We understand that most plants have elected to include in the Medical Surveillance program all employees directly engaged in activities involving vinyl chloride whether or not the exposure is in excess of the action limit. We believe it prudent to continue this policy for the foreseeable future; however, demonstration that a given employee exposure has been consistently below the action level would make it possible to avoid some of the recordkeeping requirements.

With respect to Section K.4, questions have been raised as to the willingness, or even the legal authority, for examining physicians to make unqualified statements regarding suitability for employment. In response to these questions, we have prepared sample physician's statements to be used where appropriate, which we believe meet the intent of the standard, without unduly jeopardizing the examining physician. Please note that these are sample statements only, and the wording may be modified by the examining physician to suit his needs.

Sample Alternate Physician's Statements for
Compliance with Vinyl Chloride Standard

1. "Based on diagnostic information available to me, I see no evidence of impairment of your health which might be aggravated by occupational exposure to permissible levels of vinyl chloride."
2. "Based on diagnostic information available to me, I do not believe that your continued exposure to vinyl chloride is advisable until we have arranged for further medical testing and evaluation." (Add physician's instructions for follow-up examination.)
3. Statement (1) plus: "However, I have noted other medical conditions which lead me to recommend that your personal physician. Please call me back so that we can discuss the results of your examination."

L.3 Signs and Labels - Containers of polyvinyl chloride resin waste from reactors or other waste contaminated with vinyl chloride shall be legibly labeled: Contaminated with VINYL CHLORIDE CANCER-SUSPECT AGENT.

Section L.3 could include scrap film destined to be remelted. A similar concern has been expressed by Armstrong cork regarding scrap floor tile. We understand that OSHA intends to issue a clarifying statement regarding materials of this nature. Pending clarification we will assume that the labeling requirement as stated does not apply.

M. Records

1. Employees or their designated representatives shall be provided access to examine and copy records of required monitoring and measuring.
5. Former employees shall be provided access to examine and copy required monitoring and measuring records reflecting their own exposures.

Please note that Section M.4 and 5 give employees or their representatives the right to examine and copy monitoring and measuring information.

N.1 Reports

- (1) Not later than 1 month after the establishment of a regulated area, the following information shall be reported to the OSHA Area Director. Any changes to such information shall be reported within 15 days:
 - (i) the address and location of each establishment which has one or more regulated areas; and
 - (ii) The number of employees in each regulated area during normal operations, including maintenance.

It is mandatory that, on or before February 1, 1975, the OSHA Area Director be advised as to what regulated areas exist, and the number of employees who normally work in such areas. It is sufficient to state that we have established a regulated area at a given street address, and that a given number of employees are involved. It is unnecessary to further describe the area itself.

- N.2 Emergencies - Emergencies, and the facts obtainable at that time, shall be reported within 24 hours to the OSHA Area Director. Upon request of the Area Director, the employer shall submit additional information in writing relevant to the nature and extent of employee exposures and measures taken to prevent future emergencies of similar nature.

We believe that telephone notification, supported by a memorandum to file, constitutes an adequate report unless further information is later requested by OSHA.

- N.3 Written Notice to Employees - Within 10 working days following any monitoring and measuring which discloses that any employee has been exposed, without regard to the use of respirators in excess of the permissible exposure limit, each such employee shall be notified in writing of the results of the exposure measurement and the steps being taken to reduce the exposure to within the permissible exposure limit.

This section states that employees shall be notified in writing of the results of the exposure measurement and the steps being taken to reduce the exposure to within the permissible exposure limit. Unless we receive a contrary interpretation, we will interpret this as reflecting the results of the monitoring conducted under Section D. rather than continuous monitoring conducted under Section G.

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