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August 19, 1996

(202) 434-4141

Mr. Frank Borrelli
The Vinyl Institute
30 The Horseshoe
Newark, Delaware 19711

**Re: OSHA Clarification of Medical Surveillance
Provision of Vinyl Chloride Standard**

Dear Frank:

We are enclosing a copy of an August 6, 1996 letter from Ruth McCully, director of the Occupational Safety and Health Administration's (OSHA) Office of Health Compliance Assistance, which clarifies certain medical surveillance provisions of the vinyl chloride standard. 29 C.F.R. § 1910.1027. This was an issue raised by members of the VI's Health Safety and Environment Committee.

The letter confirms the position taken by OSHA in a 1987 letter from Mr. Leo Carey, Director of OSHA's Directorate of Field Coordination. Mr. Carey's letter indicates that the twice-yearly medical examination described at 29 C.F.R. § 1910.1017(k)(2)(i) is required only for those employees who began working in vinyl chloride or polyvinyl chloride (PVC) manufacturing facilities before January 1, 1965. We are also enclosing the 1987 Carey letter, a letter from CONDEA-Vista requesting OSHA confirmation, and the relevant portion of the vinyl chloride standard.

* * *

CMA 119706

Mr. Frank Borrelli
August 19, 1996
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KELLER AND HECKMAN LLP

We trust that you find this letter and enclosures useful. Should you have any questions concerning this or any other matter, or if we can be of assistance in any way, please do not hesitate to contact us.

Cordially yours,



Peter L. de la Cruz

Enclosures

cc: Larry Thomas (w/o encl.)
John Maguire (w/o encl.)
Hugh Patrick Toner
Lewis R. Freeman, Jr.
Susan Howe
Robert H. Burnett
Thomas G. Grumbles, CONDEA-Vista

CMA 119707

U.S. Department of Labor

Occupational Safety and Health Administration
Washington, D.C. 20210

Reply to the Attention of:



AUG 6 1986

Mr. Peter L. de la Cruz
1001 G Street, NW
Suite 500 West
Washington, D.C. 20001

Dear Mr. de la Cruz:

This is in response to your correspondence dated May 24, concerning the medical surveillance requirement in the Occupational Safety and Health Administration's (OSHA) Vinyl Chloride Standard, 29 CFR 1910.1017.

The interpretation of the vinyl chloride standard provided in Mr. Leo Carey's correspondence dated June 30, 1987, represents current OSHA policy. Paragraph (k)(2)(i) addresses a situation that was found in vinyl chloride and polyvinyl chloride manufacturing plants prior to January 2, 1975, the effective date of the vinyl chloride standard. At that time employee overexposure to vinyl chloride was common, and extensive employee exposure monitoring and recordkeeping were not performed. With this paragraph, OSHA recognized that exposure monitoring for vinyl chloride and recordkeeping were not common practices. Therefore, OSHA required more stringent medical surveillance requirements for employees who worked in the vinyl chloride industry for 10 years or more as of January 2, 1975. For these individuals medical surveillance must be made available every six months.

In contrast, since January 2, 1975, medical surveillance is required annually only when employees are exposed to vinyl chloride in excess of the action level. The provision detailed in (k)(2)(i) is not applicable to the current situation because since 1975, workplace exposure to vinyl chloride has been regulated, and employee exposure has been monitored.

We appreciate your interest in occupational safety and health. If you have further concerns, please feel free to contact this office for additional information.

Sincerely,

Thomas G. Lison

Ruth McCully, Director
Office of Health Compliance Assistance

CMA 119708

Vista Chemical Company

900 Threadneedle
Houston, Texas 77079-2990
(713) 588-3000

P.O. Box 19029
Houston, Texas 77224-9029
Fax (713) 588-3236

May 25, 1995

VISTA

Mr. John B. Miles
Director of the Directorate of Compliance Programs
USDOL-OSHA
200 Constitution Avenue, N.W.
Room 3468
Washington, D. C. 20210

Dear Mr. Miles:

Vista Chemical is a producer of Vinyl Chlorine Monomer. In a recent review of the medical surveillance requirements of 29 CFR 1910.1017, the attached letter was found. It is an interpretive letter signed by Leo Carey in 1987.

This letter states a rather unique interpretation of 1910.1017(k)(2)(i) regarding the criteria for which employees are required to receive 6-month medical surveillance exams.

Can you please provide Vista with an opinion on the validity of the interpretations found in this letter or provide an alternate opinion on the applicability criteria. Please send the response to the undersigned at Vista Chemical Company, 900 Threadneedle, Houston, TX 77079.

I can be reached at 713-588-3445.

Sincerely,



Thomas G. Grumbles, C.I.H.
Manager, Product Safety and Occupational Health

/dlj

TGG Disk #8: a:\letter\miles.wpd

CMA 119709

19870630 Medical surveillance requirements in the vinyl chloride standard.
Document No. 1910.1017
Date: 06/30/1987

Cited CFR: 29 CFR 1910.1017 29 CFR 1910.1017
Commonwealth of Kentucky Labor Cabinet

June 30, 1987

Mr. Michael Salyers:

This is in response to your letter of May 1, 1987, to Mr. David Smith, concerning medical surveillance requirements in the vinyl chloride standard, 29 CFR 1910.1017. There is no indication in the vinyl chloride standard or its preamble that an employee must be exposed above the action level for at least some certain minimum number of days per year before the employer becomes obligated to afford the employee medical surveillance. Accordingly, employers must offer medical surveillance to any employee who is exposed at least one day per year above the action level for vinyl chloride. As to the question of whether employers must afford medical surveillance to employees who once were but are not now exposed above the action level for vinyl chloride, the only insight is contained in the preamble to the vinyl chloride standard, which appeared in the 39 FR 35890, Federal Register, Volume 39, Number 194, October 4, 1974, pages 35890-35896. On page 39 FR 35895, 35895 the the following statement is made, "In these instances, medical surveillance of affected employees will provide baseline data for future evaluation of their health, even if both monitoring and medical surveillance are discounted because improved controls reduce concentrations below the action level." We deduce from the statement that employers need not offer medical surveillance to employees who once were but are not now exposed above the action level for vinyl chloride.

Provision 29 CFR 1910.1017(k)(2)(i) requires scheduling of medical surveillance examinations at least every 6 months for each employee who has been employed in vinyl chloride or polyvinyl chloride manufacturing for 10 years or longer. The provision is directed at employees who started working in vinyl chloride or polyvinyl chloride manufacturing plants 10 or more years prior to January 1, 1975, which is the effective date of the permanent vinyl chloride standard.

Prior to 1975 vinyl chloride contaminated much of the air in many vinyl chloride and polyvinyl chloride manufacturing plants and many of these plants did not do extensive employee exposure monitoring and recordkeeping. Hence the applicability of 29 CFR 1910.1017(k)(2)(i) hinges on whether or not the employee's first date of employment in vinyl chloride or polyvinyl chloride plants preceded January 2, 1965, and not on an accounting of whether or not the employee's number of days of actual exposure totaled 10 or more years.

Presently, 29 CFR 1910.1017(k)(2)(i) applies when the following conditions exist: (1) An employee is currently exposed above the action level for vinyl chloride and (2) the employee's first employment in vinyl chloride and/or polyvinyl chloride manufacturing plants preceded January 2, 1965.

We appreciate the opportunity to clarify this matter for you. If you have further

CMA 119710

questions please do not hesitate to contact us.

Sincerely,

Leo Carey, Director

Directorate of Field Coordination

(2) Access to regulated areas shall be limited to authorized persons.

(f) *Methods of compliance.* Employee exposures to vinyl chloride shall be controlled to at or below the permissible exposure limit provided in paragraph (c) of this section by engineering, work practice, and personal protective controls as follows:

(1) Feasible engineering and work practice controls shall immediately be used to reduce exposures to at or below the permissible exposure limit.

(2) Wherever feasible engineering and work practice controls which can be instituted immediately are not sufficient to reduce exposures to at or below the permissible exposure limit, they shall nonetheless be used to reduce exposures to the lowest practicable level, and shall be supplemented by respiratory protection in accordance with paragraph (g) of this section. A program shall be established and implemented to reduce exposures to at or below the permissible exposure limit, or to the greatest extent feasible, solely by means of engineering and work practice controls, as soon as feasible.

(3) Written plans for such a program shall be developed and furnished upon request for examination and copying to authorized representatives of the As-

sistant Secretary and the Director. Such plans shall be updated at least every six months.

(g) *Respiratory protection.* Where respiratory protection is required under this section:

(1) 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 April 1, 1976, 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 April 1, 1976, 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.

(2) Respirators shall be selected from among those jointly approved by the Mine Safety and Health Administration, Department of the Interior, and the National Institute for Occupational Safety and Health under the provisions of 30 CFR Part 11.

(3) A respiratory protection program meeting the requirements of § 1910.134 shall be established and maintained.

(4) Selection of respirators for vinyl chloride shall be as follows:

Atmospheric concentration of vinyl chloride	Required apparatus
(a) Unknown, or above 3,600 ppm	Open-circuit, self-contained breathing apparatus, pressure demand type, with full facepiece.
(b) Not over 3,600 ppm	(A) Combination type C supplied air respirator, pressure demand type, with full or half facepiece, and auxiliary self-contained air supply; or (B) Combination type, supplied air respirator continuous flow type, with full or half facepiece, and auxiliary self-contained air supply.
(c) Not over 1,000 ppm	Type C, supplied air respirator, continuous flow type, with full or half facepiece, helmet or hood.
(d) Not over 100 ppm	(A) Combination type C supplied air respirator demand type, with full facepiece, and auxiliary self-contained air supply; or (B) Open-circuit self-contained breathing apparatus with full facepiece, in demand mode; or (C) Type C supplied air respirator, demand type, with full facepiece.
(e) Not over 25 ppm	(A) A powered air-purifying respirator with hood, helmet, full or half facepiece, and a canister which provides a service life of at least 4 hours for concentrations of vinyl chloride up to 25 ppm; or (B) Gas mask, front- or back-mounted canister which provides a service life of at least 4 hours for concentrations of vinyl chloride up to 25 ppm.
(f) Not over 10 ppm	(A) Combination type C supplied-air respirator, demand type, with half facepiece, and auxiliary self-contained air supply; or (B) Type C supplied-air respirator, demand type, with half facepiece; or (C) Any chemical cartridge respirator with an organic vapor cartridge which provides a service life of at least 1 hour for concentrations of vinyl chloride up to 10 ppm.

(5)(i) Entry into unknown concentrations or concentrations greater than 36,000 ppm (lower explosive limit) may

be made only for purposes of life rescue; and

(ii) Entry into concentrations of less than 36,000 ppm, but greater than 3,600 ppm may be made only for purposes of life rescue, firefighting, or securing equipment so as to prevent a greater hazard from release of vinyl chloride.

(6) Where air-purifying respirators are used:

(i) Air-purifying canisters 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.

(7) Apparatus prescribed for higher concentrations may be used for any lower concentration.

(h) *Hazardous operations.* (1) Employees engaged in hazardous operations, including entry of vessels to clean polyvinyl chloride residue from vessel walls, shall be provided and required to wear and use;

(i) Respiratory protection in accordance with paragraphs (c) and (g) of this section; and

(ii) Protective garments to prevent skin contact with liquid vinyl chloride or with polyvinyl chloride residue from vessel walls. The protective garments shall be selected for the operation and its possible exposure conditions.

(2) Protective garments shall be provided clean and dry for each use.

(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.

(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.

(i) The program shall include:

(i) The nature of the health hazard from chronic exposure to vinyl chloride including specifically the carcinogenic hazard;

(ii) The specific nature of operations which could result in exposure to vinyl chloride in excess of the permissible limit and necessary protective steps;

(iii) The purpose for, proper use, and limitations of respiratory protective devices;

(iv) The fire hazard and acute toxicity of vinyl chloride, and the necessary protective steps;

(v) The purpose for and a description of the monitoring program;

(vi) The purpose for, and a description of, the medical surveillance program;

(vii) Emergency procedures;

(viii) Specific information to aid the employee in recognition of conditions which may result in the release of vinyl chloride; and

(ix) A review of this standard at the employee's first training and indoctrination program, and annually thereafter.

(2) All materials relating to the program shall be provided upon request to the Assistant Secretary and the Director.

(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.

(1) At the time of initial assignment, or upon institution of medical surveillance;

(i) A general physical examination shall be performed, with specific attention to detecting enlargement of liver, spleen or kidneys, or dysfunction in these organs, and for abnormalities in skin, connective tissues and the pulmonary system (See Appendix A).

(ii) A medical history shall be taken, including the following topics:

- (A) Alcohol intake;
- (B) Past history of hepatitis;
- (C) Work history and past exposure to potential hepatotoxic agents, including drugs and chemicals;
- (D) Past history of blood transfusions; and
- (E) Past history of hospitalizations.

(iii) A serum specimen shall be obtained and determinations made of:

- (A) Total bilirubin;
- (B) Alkaline phosphatase;
- (C) Serum glutamic oxalacetic transaminase (SGOT);
- (D) Serum glutamic pyruvic transaminase (SGPT); and
- (E) Gamma glutamyl transpeptidase.

(2) Examinations provided in accordance with this paragraph shall be performed at least:

- (i) Every 6 months for each employee who has been employed in vinyl chloride or polyvinyl chloride manufacturing for 10 years or longer; and
- (ii) Annually for all other employees.

(3) Each employee exposed to an emergency shall be afforded appropriate medical surveillance.

(4) A statement of each employee's suitability for continued exposure to vinyl chloride including use of protective equipment and respirators, shall be obtained from the examining physician promptly after any examination. A copy of the physician's statement shall be provided each employee.

(5) If any employee's health would be materially impaired by continued exposure, such employee shall be withdrawn from possible contact with vinyl chloride.

(6) Laboratory analyses for all biological specimens included in medical examinations shall be performed in

laboratories licensed under 42 CFR Part 74.

(7) If the examining physician determines that alternative medical examinations to those required by paragraph (k)(1) of this section will provide at least equal assurance of detecting medical conditions pertinent to the exposure to vinyl chloride, the employer may accept such alternative examinations as meeting the requirements of paragraph (k)(1) of this section, if the employer obtains a statement from the examining physician setting forth the alternative examinations and the rationale for substitution. This statement shall be available upon request for examination and copying to authorized representatives of the Assistant Secretary and the Director.

(1) *Signs and labels.* (1) Entrances to regulated areas shall be posted with legible signs bearing the legend:

**CANCER-SUSPECT AGENT AREA
AUTHORIZED PERSONNEL ONLY**

(2) Areas containing hazardous operations or where an emergency currently exists shall be posted with legible signs bearing the legend:

**CANCER-SUSPECT AGENT IN THIS AREA
PROTECTIVE EQUIPMENT REQUIRED
AUTHORIZED PERSONNEL ONLY**

(3) 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

(4) Containers of polyvinyl chloride shall be legibly labeled:

POLYVINYL CHLORIDE (OR TRADE NAME)

Contains

VINYL CHLORIDE

VINYL CHLORIDE IS A CANCER-SUSPECT AGENT

(5) Containers of vinyl chloride shall be legibly labeled either:

(1)

VINYL CHLORIDE

**EXTREMELY FLAMMABLE GAS UNDER
PRESSURE**

CANCER SUSPECT AGENT

or (ii) In accordance with 49 CFR Parts 170 through 189, with the additional legend:

CANCER-SUSPECT AGENT

applied near the label or placard.

(6) No statement shall appear on or near any required sign, label or instruction which contradicts or detracts from the effect of, any required warning, information or instruction.

(m) *Records.* (1) All records maintained in accordance with this section shall include the name and social security number of each employee where relevant.

(2) Records of required monitoring and measuring and medical records shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.20 (a) through (e) and (g) through (i). These records shall be provided upon request to the Director. Authorized personnel rosters shall also be provided upon request to the Assistant Secretary and the Director.

(i) Monitoring and measuring records shall:

(A) State the date of such monitoring and measuring and the concentrations determined and identify the instruments and methods used;

(B) Include any additional information necessary to determine individual employee exposures where such exposures are determined by means other than individual monitoring of employees; and

(C) Be maintained for not less than 30 years.

(ii) [Reserved]

(iii) Medical records shall be maintained for the duration of the employment of each employee plus 20 years, or 30 years, whichever is longer.

(3) In the event that the employer ceases to do business and there is no successor to receive and retain his records for the prescribed period, these records shall be transmitted by registered mail to the Director, and each employee individually notified in writing of this transfer. The employer shall

also comply with any additional requirements set forth in 29 CFR 1910.20(h).

(n) *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.

(2) 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.

(3) 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.

(c) *Effective dates.* (1) Until April 1, 1975, the provisions currently set forth in § 1910.93q of this part shall apply.

(2) Effective April 1, 1975, the provisions set forth in § 1910.93q of this part shall apply.

(Approved by the Office of Management and Budget under control number 1218-0010)

**APPENDIX A to § 1910.1017—SUPPLEMENTARY
MEDICAL INFORMATION**

When required tests under paragraph (k)(1) of this section show abnormalities, the tests should be repeated as soon as practicable, preferably within 3 to 4 weeks. If tests remain abnormal, consideration should be given to withdrawal of the employee from contact with vinyl chloride, while a more comprehensive examination is made.

Additional tests which may be useful

A. For kidney dysfunction: urine examination for albumin, red blood cells, and exfoliative abnormal cells.

B. Pulmonary system: Forced vital capacity, Forced expiratory volume at 1 second,