

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration
WASHINGTON, D.C. 20210



JUN 23 1976

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JUN 25 1976

Mr. David A. Kuhn
Director of Biomedical and Environmental Affairs
Continental Oil Company
Post Office Box 2197
Houston, Texas 77001

Dear Mr. Kuhn:

This is in reference to our letter dated April 7, 1976 concerning your request for a temporary variance from Section 1910.1017(g)(2) and (4) Vinyl Chloride - Respiratory Protection, of the Occupational Safety and Health Standards.

After carefully reviewing your application, it has been determined that there is some question about the effect a canister would have on the fit of a half face piece. Obviously, leakage around the face piece would negate the value of the respirator. Without testing this combination, we are unable to make a determination concerning its safety.

Testing of respirators is not conducted by OSHA, but by the National Institute for Occupational Safety and Health under its respirator approval program. NIOSH is presently testing the combination of a canister with a half face piece, but this combination is not yet approved. Therefore, your use of this combination will not be considered to constitute compliance with the vinyl chloride standard until the combination respirator is approved by NIOSH.

We are maintaining close contact with NIOSH to follow the progress of their testing. If this combination proves acceptable, we will be in immediate contact with you. No further action will be taken on your request for a variance.

Sincerely,

Richard P. Wilson

for
Barry White
Associate Assistant Secretary
for Regional Programs



Conoco Chemicals Division

Continental Oil Company
P. O. Box 2197
Houston, Texas 77001

March 25, 1976

Assistant Secretary of Occupational
Safety and Health
U.S. Department of Labor
Washington, D.C. 20210

Dear Sir:

Pursuant to Section 6(b)(6)(A) of the Occupational Safety and Health Act of 1970 (84 Stat. 1596: 29USC655), Conoco Chemicals apply for a temporary variance under 29CFR1905.10(a) and (b) and an interim order under 29CFR1905.10(c) from the requirements for respiratory protection for work environments in the standard for exposure to vinyl chloride, 29CFR1910.1017(g)(2) and (4).

(1) The name and address of the applicant are:

Conoco Chemicals
Continental Oil Company
P. O. Box 2197
Houston, Texas 77001

(2) The addresses of the places of employment involved are:

Conoco Chemicals - PVC Plant
P. O. Box 91, Hwy. 25
Aberdeen, MS 39730

Conoco Chemicals - VCM Plant
P. O. Box 605
Westlake, LA 70669

Conoco Chemicals - PVC Plant
P. O. Box 15360
5200 S.E. 59th Street
Oklahoma City, OK 73115

(3) Conoco Chemicals seek a variance from 29CFR1910.1017(g)(2) and (4)(vi).

(4) Conoco find that the only canister respirators approved by the National Institute for Occupational Safety and Health (NIOSH) for vinyl chloride service require a full face piece. For atmospheres less than 10 ppm vinyl chloride, no canister respirators with half face pieces and no chemical cartridge respirators are yet approved. It is, therefore,

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Conoco Chemicals' position that acceptable respiratory apparatus is currently unavailable because NIOSH-approved apparatus is inherently unsafe, restrictive of mobility and very uncomfortable for many common plant activities. Exhibit I is a representation from the Safety Director of our vinyl chloride plant about this condition from first-hand knowledge. Exhibit II is an opinion about the safety and health aspects of the full face piece respiratory apparatus from Conoco's Assistant Medical Director supplied at the request of Conoco Chemicals to document the concern the Medical Department had expressed about this matter. Note that, while the respiratory apparatus approved by NIOSH is acceptable for quiet, immobile activities, it is unsafe for strenuous activities such as construction and maintenance work, driving industrial vehicles and working from elevated platforms.

- (5) Conoco Chemicals have already taken steps to reduce employee exposure to vinyl chloride by installing significant engineering controls and modifying our work practices. Nevertheless, as OSHA recognized in the preamble to the vinyl chloride standard, we will not be able to reach standard requirements for all job classifications all the time even with diligent pursuit of our engineering modifications. Therefore, beginning April 1, 1976, we must escalate our respiratory protection program. We will equip our employees and require them to wear in atmospheres above 1 but less than 10 ppm of vinyl chloride a respirator consisting of a NIOSH-approved half face piece mask with a NIOSH-approved canister for vinyl chloride. For example, we would use, but not limit ourselves to, a combination of the half face piece from the MSA respiratory device listed as part number 46085 with a canister listed as MSA part number 461480.

Using this equipment, we can give our employees ample protection from inhalation of vinyl chloride in atmospheres up to 10 ppm based on the attached evidence in Exhibits III and IV. Consider first Exhibit III, "Respirator Protection Factors," by Edwin C. Hyatt. Protection factor (PF) is used to determine the concentration limit where the respirator will provide safety for vinyl chloride. With a 1 ppm maximum eight-hour time-weighted average, a respirator with a PF of 10 will be effective in atmospheres containing up to 10 ppm of vinyl chloride. In the summary and recommendations of Exhibit III, under B(2)(a), a PF of 10 is recommended for a demand-type supplied air respirator with a half mask face piece. This is further specified in Tables I and IA.

Comments to OSHA by the Industrial Safety Equipment Association (Exhibit IV) critique the conclusions of Exhibit III. Table C-1 shows that 95% or more of the test results for nine of the 10 respirators denote a PF of 20, indicating that Hyatt's 10 is conservative. In Table C-2 all respirators tested met the PF = 10 100% of the time.

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The conservative PF = 10, coupled with a comprehensive respiratory program patterned after 29CFR1910.134, will provide ample protection to employees in atmospheres containing less than 10 ppm of vinyl chloride.

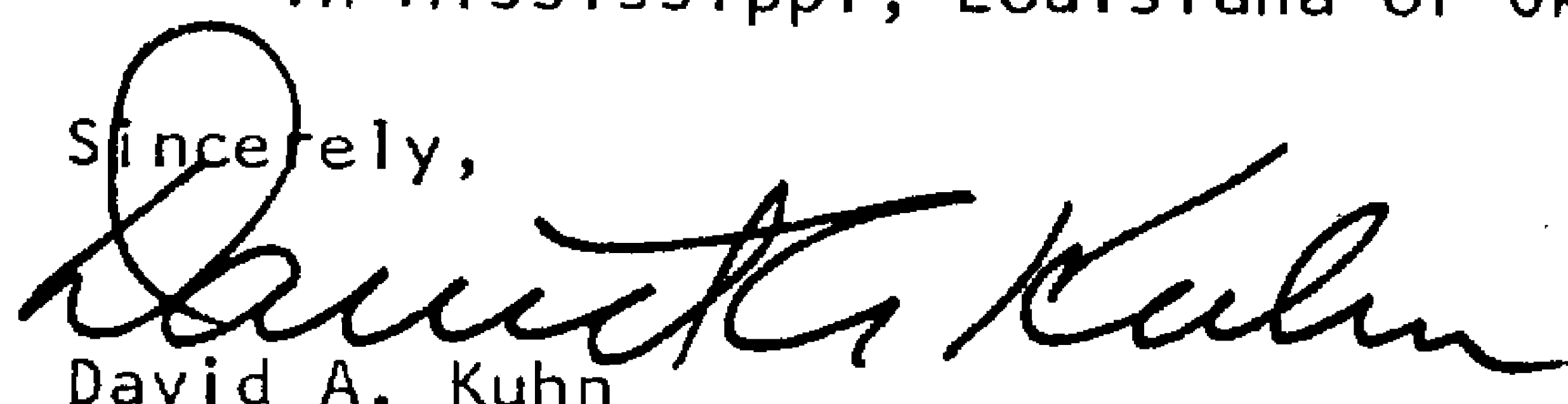
All these steps will be taken by April 1, 1976.

- (6) Conoco Chemicals will be able to comply with the standard on the date NIOSH approves a canister apparatus fitted with a half face piece mask or a chemical cartridge mask.
- (7) Conoco Chemicals state that we are unable to comply with the standard by its effective date because required respiratory protection apparatus is unavailable. We are taking all available steps to safeguard our employees against excessive exposure to vinyl chloride by implementing engineering controls, modifying our work practices and maintaining a respiratory protection program.
- (8) We do not request a hearing.
- (9) The undersigned states that employees have been notified as follows:
 1. A copy of this application for variance has been given to the union shop steward in unionized plants and to the chairman of the safety committee in the non-unionized plant.
 2. This application for variance has been posted on the bulletin boards of all plants where notices of this kind are usually posted.
- (10) Each plant has informed affected employees by giving a copy of the variance to the union shop steward in our unionized plants and to the chairman of the safety committee in the non-unionized plant. At the same time, these employee representatives have been given a notice of our intent to apply for this variance, which includes a notice that any affected employee has a right to petition the Assistant Secretary of Labor for a hearing on this matter.

This application for variance has been posted prominently on the bulletin boards of all plants where notices of this kind are usually posted. Next to it is posted a notice of our intent to apply for this variance, which includes a notice that any affected employee has a right to petition the Assistant Secretary of Labor for a hearing on this matter.

- (11) Reconciliation of this application for variance with affected state plans is unnecessary because there is no state plan currently in effect in Mississippi, Louisiana or Oklahoma.

Sincerely,



David A. Kuhn

Director of Biomedical and Environmental Affairs

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enc.

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