

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

TO : Edward J. Baier
Acting Director, NIOSH

DATE: October 18, 1974

FROM : Acting Director, Office of Research
and Standards Development

SUBJECT: Respirator Use Recommendations for Vinyl Chloride

The current NIOSH respiratory protection recommendations, as expressed in the Recommended Standard for Occupational Exposure to Vinyl Chloride, calls for use of positive-pressure supplied air respirators where there is detectable exposure to vinyl chloride.

In preparing for the above recommendation, the NIOSH Engineering Branch in Cincinnati tested organic vapor canisters and cartridges for effectiveness against vinyl chloride. An Evaluation of Organic Vapor Respirator Cartridges and Canisters Against Vinyl Chloride, by David L. Smith and William S. Giesler (NIOSH Publication No. 75-111) describes these tests and supports the above recommendations.

On September 19, 1974, Mr. Grover Wrenn of CSHA, met with Messrs. Lynch, Gudeman, and Bryant of NIOSH, to discuss respiratory protection against vinyl chloride. Mr. Wrenn indicated then that OSHA was determined to permit use of powered air-purifying respirators and gas masks for vinyl chloride respiratory protection for routine and non-routine use, respectively.

OSHA, subsequently, revised these proposed use requirements and the Occupational Safety and Health Standard for Exposure to Vinyl Chloride which appeared in the October 4, 1974, Federal Register (39 FR 35890), contained the following general requirements:

1. Respirator use is voluntary.
2. MESA/NIOSH - approved respirators shall be used.
3. A respirator program shall be established and maintained.

4. The following respirators may be used.

Over 3,600 ppm	positive pressure SCEA
Not over 3,600 ppm	supplied air respirators (positive pressure)
Not over 100 ppm	supplied air respirators
Not over 25 ppm	powered air purifying respirator gas mask (4 hours service life up to 25 ppm)
Not over 10 ppm	chemical cartridge respirator (1 hour service life up to 10 ppm)

The above respirator use requirements in item 4 are based on expected performance criteria that would reduce the vinyl chloride concentration in the wearer's breathing to acceptable levels.

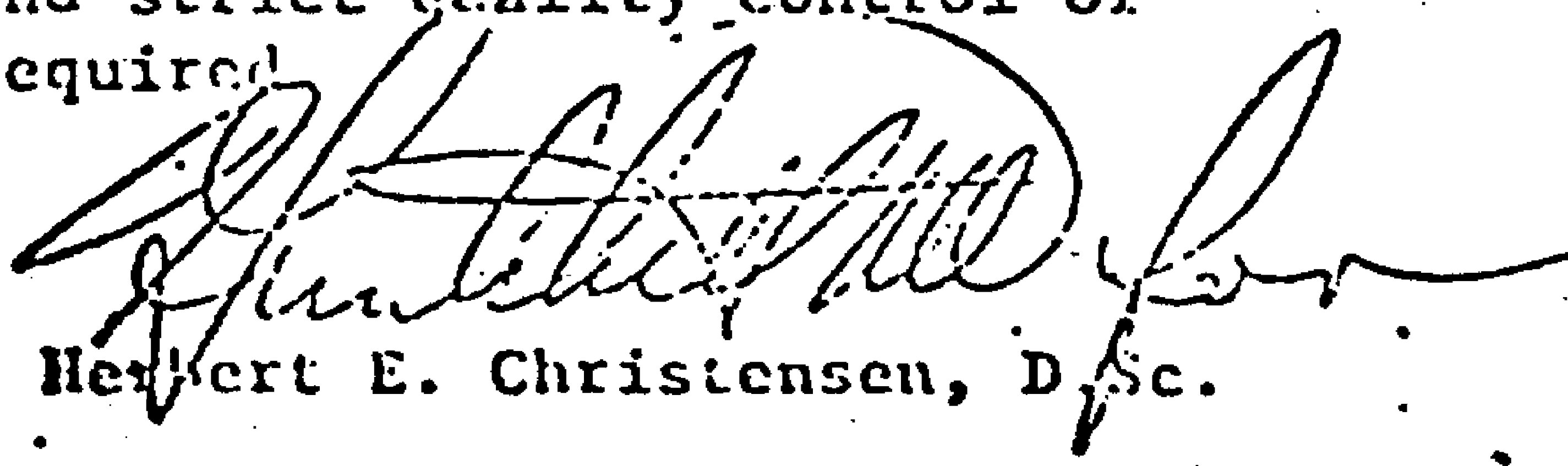
No canister or cartridge masks are currently available which meet NIOSH requirements nor are any expected to be approved during this year.

Consequently, the original recommendation by NIOSH is to be reiterated, i.e. employees entering any regulated area shall be provided with and required to wear and use a full-face, supplied air respirator, of the continuous flow or pressure, demand type in accordance with 1910.134.

In response to this publication, the NIOSH Engineering Branch has prepared test requirements for, and TCL is preparing to approve, canisters and cartridges meeting the following general performance requirements:

<u>Device</u>	<u>Test Concentration, ppm Vinyl Chloride</u>	<u>Service life, hours</u>
Canister	25	6
Air-purifying cartridge	10	2
Powered air- purifying cartridge	25	6

Each type of device shall be equipped with an end-of-service life indicator. The approved devices would bear labels requiring careful fitting to the respirator wearer and strict quality control of sorbent materials which would be required.


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Attachment