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PPG INDUSTRIES

INTER-OFFICE CORRESPONDENCE

Date: December 12, 1977

From: P. J. Snyder

Location: 10 West

To: H. B. Lovejoy, M.D.

Subject: Ethylene Dichloride Workpractice

Hal,

Attached please find a rough draft of the Medical Surveillance section of the proposed Ethylene Dichloride Workpractice Guideline. Would you at your convenience review this draft from the standpoint of appropriateness and suitability. Any modifications or suggestions that you have to offer will be appreciated. This draft incidentally, was based on the Vinylidene Chloride Guideline issued last May.

I am also enclosing some information on Ethylene Dichloride, as extracted from NIOSH publications.

Thanks again.

Phil Snyder

P. J. Snyder

/alc

Attachments

cc: Z. G. Bell
F. C. Dehn -- w/o attachments
F. C. Ludden

SL 088264

FORM 503-A REV 6-1-70

K. MEDICAL SURVEILLANCE

1 A GENERAL

Any employee assigned work in an area where a potential exposure to Ethylene Dichloride may occur shall be placed on a medical surveillance program. 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. At the time of initial assignment, or upon institution of medical surveillance:

B. MEDICAL HISTORY

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

(1) Alcohol intake

(2) past history of hepatitis

(3) work history and past exposure to potential hepatotoxic agents including drugs and chemicals.

(4) Past history of blood transfusions

(5) Past history of hospitalization

(6) Signs and symptoms associated with exposure to EDC, including: lassitude, and malaise, nausea, dizziness, burning sensation of the eyes and lacrimation, anorexia and a metallic taste in the mouth

C. Physical Examinations

A general physical examination shall be performed with specific attention to detecting enlargement of liver, spleen or kidneys, or dysfunction in these organs. Particular attention shall also be given to detecting abnormalities in skin, connective tissues, the pulmonary, circulatory and nervous systems.

D Serum Specimens

A serum specimen shall be obtained and a determination made of:

(1) Total bilirubin
(2) Alkaline phosphatase
(3) Serum glutamic oxalacetic transaminase (SGOT)
(4) Serum glutamic pyruvic transaminase (SGPT)
(5) Gamma Glutamyl Transpeptidase

E. Respiratory System Evaluation

(1) Pulmonary function testing shall be conducted and as a minimum, a determination made of:

(a) Forced Vital Capacity
(b) Forced Expiratory Volume (one second)

(2) A chest Roentgenogram (posterior-anterior, 14 x 17 inches), shall be made.

F Evaluation of Kidney Function

(1) Tests shall be made for kidney dysfunction, and as a minimum, include urine examination for albumin, glucose, red blood cells and granular casts.

G. When required tests under paragraph K-1 of this section show abnormalities, the tests should be repeated as soon as practicable, preferably within three to four weeks. If tests remain abnormal, consideration should be given to withdrawal of the employee from further potential contact and/or exposure with EDC, while a more comprehensive examination is made.

H. Additional Testing That May be Helpful:

- Additional serum tests: lactic acid dehydrogenase, lactic acid dehydrogenase isoenzyme, protein determination and protein electrophoresis.
- For a more comprehensive examination on repeated abnormal serum tests: Hepatitis B antigen and liver scanning.

2. Frequency of Examinations

(A) Examinations provided in accordance with paragraph K-1 shall be performed at least annually.

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

3 Employee Suitability

(A) A statement of each employee's suitability for continued exposure to ethylene dichloride including use of respiratory protective equipment shall be obtained from the examining physician.

(B) If any employee's health, in the opinion of the examining physician, would be materially impaired by continued assignment to an area of potential exposure to ethylene dichloride, such employee shall be removed from possible contact with ethylene dichloride.

(C) Based on studies that indicated that Ethylene Dichloride can be transferred to babies via the milk of nursing mothers and in the complete absence of information on the susceptibility of infants to EDC, it is recommended that nursing mothers not work in areas with potential contact and/or exposure to Ethylene Dichloride.

4. 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 health conditions pertinent to the exposure of ethylene dichloride, 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 rational for substitution.