EDC WORK PRACTICE GUIDELINES REVIEW, DRAFT II

June 6, 1978

Those Attending:

A. G. Baker	Dr. J. C. Calandra
J. M. Otto	Dr. Z. G. Bell
D. E. Price	R. G. Corley
A. J. Kubicek	J. C. Delgado
C. E. Newton	P. J. Snyder

The purpose of this meeting was to review and discuss the second draft of the EDC Work Practice Guideline prepared by Environmental Affairs, Dr. Z. G. Bell.

DISCUSSION

1. The question was raised as to why the internal guideline is proposed at 5 ppm when the current standard is 50 ppm. After considerable discussion, the answers appeared to be:

    a. This is the level recommended by NIOSH.

    b. EDC is suspected to be carcinogenic.

2. Has the 5 ppm level been reviewed by medical people? Dr. Bell stated that "Corporate medical" has reviewed this guideline. Although Dr. Calandra had apparently not had an opportunity for review, he stated that all these type compounds would have to be treated almost like it was vinyl chloride, and we should strive for the lowest feasible levels in the workplace.

3. Monitoring requirements were discussed at length. It is not possible to accurately assess the amount of additional monitoring required, since this is a function of how many over-standard readings (repeat monitoring requirement) are obtained.

    Dr. Bell explained that it was not intended that certain jobs with inherent overstandard exposure be monitored over and over. Once it is established that a certain task involves over exposure, a work practice (respirator requirement) should be established and monitoring discontinued. He cautioned that this would not mean that no effort would be required to affect engineering control.

4. Dr. Calandra directed that a copy of the medical surveillance guidelines be given to Dr. Hennington for his review and information. These are the original - Draft I guidelines, which are more detailed than the Draft II version.

5. The need for quarterly progress reports to the Environmental Affairs Department was questioned, and they indicated that annual reports would be acceptable.

6. At the conclusion of the discussion, Mr. Baker stated that the Beaumont Plant would submit its comments in writing, to include estimates of the economic and personnel resources required. It was estimated that the OSHA Contest Case and other work priorities would place the response about September. Dr. Bell responded that the guideline would be issued through Mr. Klimas prior to that date.

7. In response to Mr. Baker's question, Dr. Bell stated that this EDC Work Practice Guideline should take precedence over any effort to implement the "Twelve Point Industrial Hygiene Program".

8. It would appear that these guidelines will be promulgated without consideration of any comments from the Beaumont plant, according to Dr. Bell, since this will probably occur next month while all our attention is still directed toward the OSHA case. Dr. Bell did state, however, that he would recommend to Mr. Klimas that there was less urgency in implementing these guidelines at the Beaumont plant. This is because as consumers of EDC, we do not have the same magnitude of problems as the production facilities.

Roger Corley

RC:pf

cc: Those Attending
C. R. Reiche
R. E. Sourwine

SL 088184

K. Medical Surveillance

1. 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, the following procedures shall be accomplished.

2. Medical History

a. 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 acute exposure to EDC, include: lassitude, and malaise, nausea, dizziness, burning sensation of the eyes and lacrimation, anorexia and a metallic taste in the mouth; chronic: cardiac, hepatic, neurological and pulmonary effects have been found

3. Physical Examinations - A general physical examination shall be performed with specific attention to heart, lungs, liver, spleen and kidneys, or dysfunction in these organs. Attention shall also be given to detecting abnormalities in skin, connective tissues, and nervous systems.

4. Special tests

a. Serum specimens

(1) total bilirubin

(2) alkaline phosphatase

(3) serum glutamic oxalacetic transaminase (SGOT)

(4) serum glutamic pyruvic transaminase (SGPT)

(5) gamma glutanyl transpeptidase (GGTP)

(6) BUN

b. 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

c. Cardiac evaluation - electrocardiogram shall be made

d. Evaluation of kidney function - tests shall be made for kidney dysfunction, and as a minimum, include urine examination for albumin, glucose, cells and casts

5. 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

6. Abnormal tests - 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. Additional testing that may be helpful: (1) additional serum tests - lactic acid dehydrogenase, lactic acid dehydrogenase isoenzyme, protein determination and protein electrophoresis. (2) for a more comprehensive examination on repeated abnormal serum tests - hepatitis B antigen and liver scanning.

7. 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 absense 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.

8. If the examining physician determines that alternative medical examinations to those required by paragraph K-1 of this section will provide at least

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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.

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