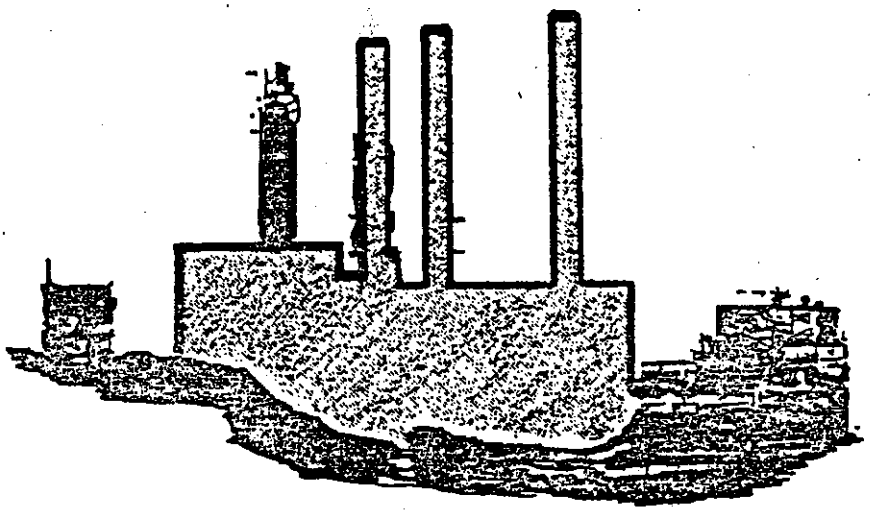
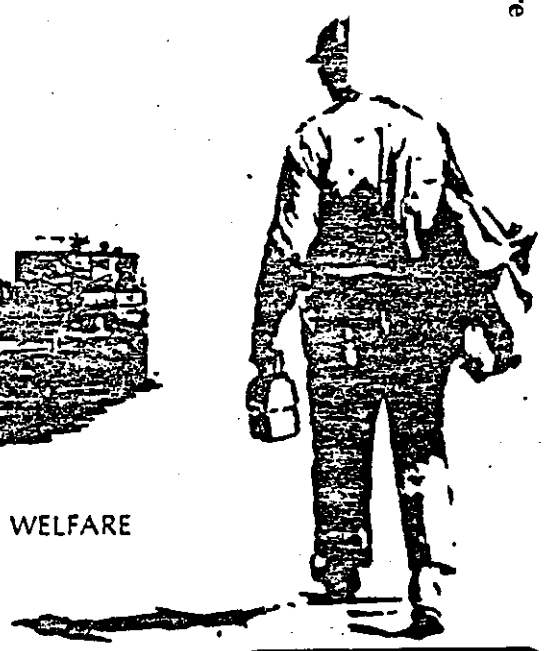
NIOSH

CRITERIA FOR A RECOMMENDED STANDARD....

OCCUPATIONAL EXPOSURE DURING THE MANUFACTURE AND FORMULATION C PESTICIDES





U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
National Institute for Occupational Safety and Health

MLAP

criteria for a recommended standard....

OCCUPATIONAL EXPOSURE DURING THE MANUFACTURE AND FORMULATION OF PESTICIDES

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
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understand the serious nature of the hazard involved.

The training program should describe the role of each work practice in reducing potential exposure. The need for and value of each work practice should be clearly understood by the worker. The employee who is able to recognize the hazard and knows the means to control it is better equipped to protect himself from exposure. If the employee recognizes symptoms of exposure, he or she can request medical attention sooner. Detection of the odor of a pesticide being handled while wearing a respirator should be recognized by the worker as a warning that the respirator is not functioning properly.

In summary, the training requirements are intended to reinforce the other work practices by enabling the worker to understand the nature of the hazards associated with pesticidal chemicals and how to avoid overexposure. Worker acceptance of recommended work practices as well as an understanding of and the ability to avoid chronic health hazards can be improved through training.

(c) Supervision

Inadequate supervision was described as a cause of overexposure in a case in which a man was mixing 2,4-dichloro-6-(o-chloroanilino)-s-triazine in a tank when he began to notice itching and burning of his face and hands. A physician gave him local and systemic steroids for treatment of his rash. He had been provided with protective clothing but might not have used it at all times. In addition, some of the containers were not labeled to require the use of protective

equipment [297].

An employee cleaning a pump used in mevinphos production at a formulation plant was overexposed as the result of not wearing recommended safety equipment. He reported to a physician with symptoms that included miosis, excessive salivation, and excessive perspiration. He was hospitalized. His employer was issued a notice of violation for lack of adequate supervision of employees [297].

Inadequate supervision was indicated as a causal factor in some of the accidental overexposures to pesticides discussed earlier. The relationship between supervision and the implementation of good work practices is evident in most industrial situations. The potential is always present for production requirements to conflict with work procedures designed to prevent injury or illness. To protect workers' health in a pesticide plant, it is essential for supervisory personnel to be cognizant of the potential risks that occur to workers when proper work practices are not followed. Supervisors should be present to assure that proper procedures are followed during start-up, loading and unloading, and during tank entry operations. Supervisors should also be prepared to direct other workers during emergency situations. Occasional checks should be made to be certain that personal protective equipment and protective clothing are properly worn. Supervisors should also know and watch for signs of overexposure to pesticides and should recommend medical attention for workers who exhibit signs of overexposure. One positive strategy for concerned management

would be to rate supervisory personnel on understanding and implementing safe and healthful work practices in addition to normal factors such as productivity and economy of operation.

(d) Administrative Controls

Administrative controls are actions taken by the employer to schedule operations and work assignments in a way that minimizes the extent, severity, and variety of potential exposure. For example, only necessary personnel should be permitted to work in areas where there is a high risk of exposure. The duration of exposure may also be reduced by rotating employees between assignments that involve exposure and those that do not. Minimizing the number of different pesticides that an individual worker is exposed to is also desirable. This practice would make it easier to monitor effects and, more importantly, would avoid possible synergistic effects that may result when exposure to several different chemicals occurs.

There are four activities that can support work practices: labeling and posting, training, supervision, and administrative contols. The emphasis in training should be on developing good work practices to prevent emergencies, accidents, injuries, and overexposures. The educational process should be reinforced through labeling and posting that identifies hazards and repeats information concerning proper procedures. Labels and signs also serve as warnings to uninformed individuals in the plant. Supervision is an essential element in the proper implementation of good work practices as well as a resource for dealing with emergency situations or for observing signs of overexposure in

workers. Finally, administrative control is an additional method of minimizing worker exposure through allocation of work assignments and in conjunction with other recommended work practices.