U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
CENTER FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
CINCINNATI, OHIO 45202

HEALTH HAZARD EVALUATION DETERMINATION
REPORT NO. 75-85-231

MCLEAN TRUCKING COMPANY
SHARONVILLE, OHIO
NOVEMBER 1975

I. TOXICITY DETERMINATION

Based on the results of confidential employee interviews conducted on May 23 and July 10, 1975, and available literature concerning the toxicity of substances involved in this evaluation, it has been determined that a health hazard does not exist at this time from "Instant Dri" absorbant as presently used on the dock of McLean Trucking Company in Cincinnati. It is recommended, however, that precautions be instituted when handling freight of a highly toxic nature (See Section IV C, Recommendations).

II. DISTRIBUTION AND AVAILABILITY OF DETERMINATION REPORT

Copies of this hazard evaluation determination are available upon request from the Hazard Evaluation Services Branch, NIOSH, U.S. Post Office Building, Room 508, 5th and Walnut Streets, Cincinnati, Ohio 45202. Copies have been sent to:

a) McLean Trucking Company, Sharonville, Ohio
b) Authorized Representative of Employees
c) U. S. Department of Labor - Region V
d) NIOSH - Region V

For the purpose of informing "affected employees", the employer shall promptly "post" the determination report in a prominent place(s) near where exposed employees work for a period of 30 calendar days.

III. INTRODUCTION

Section 20(a)(6) of the Occupational Safety and Health Act of 1970, 29 U.S.C. 669(a)(6), authorizes the Secretary of Health, Education, and Welfare, following a written request by any employer or authorized representative of employees, to determine whether any substance normally found in the place of employment has potentially toxic effects in such concentrations as used or found. NIOSH received such a request from the authorized representative of employees at McLean Trucking Company, Cincinnati, Ohio, to evaluate the exposure to dust from "Instant Dri" absorbant after noting complaints of throat irritation believed caused by this substance.

IV. HEALTH HAZARD EVALUATION

A. Plant Process

The McLean terminal in Cincinnati serves both as a local pick-up and dispatch terminal, and also as a bulk passing terminal. On the order of a million pounds of freight per day are loaded and unloaded across the dock to and from trucks going to various locations. Approximately two hundred trucks per week are serviced this way. Materials shipped by this common carrier include everything except class A and B explosives. All loading and sorting of cargo is done on the 27,000 square foot dock which is walled in by terminal offices on the east side only.

Due to the fact that the shipping dock is open on three sides, it is subjected to weather conditions. When rain or snow occurs with strong winds, the floor of the dock becomes wet and slippery. To overcome this problem, and a similar problem created by spills of various other liquids, a material called "Floor Dry" or "Instant Dri" is spread on the dock to absorb the liquid. During periods of heavy workloads, the practice had been to leave this material on the dock for several days, during which time the liquid evaporated out, leaving a dry powder which was thrown into the air by the fork lifts and other traffic. This airborne powder was being inhaled by the dock workers, hence the request for a Health Hazard Evaluation.

B. Evaluation Results

Medical questionnaires were administered to 17 of the dock workers during the initial and follow-up visits. These interviews do not provide any evidence which indicates that "Instant Dri" as it is being used in this terminal is a health problem. Due to the infrequent use of "Floor Dry" in the summer months, and in light of information gathered during employee interviews, a decision was made not to conduct environmental sampling. Analysis of bulk samples of the allegedly hazardous material revealed an average of twenty per cent free crystalline silica. According to information furnished by the supplier, the remaining eighty per cent is believed to be aluminum silicate, although laboratory results were unable to verify this.

Due to the infrequent use, short duration and large particle size of "Instant Dri", there is no evidence to support the allegation that the dock workers at McLean Trucking Company are subjected to a health hazard from this material. It is suggested, however, that squeegees be used whenever practical in place of "Instant Dri" to remove water from the dock. It is also further suggested that when "Instant Dri" is used, it be removed as soon as practical. The material is supplied in granules and it appears unlikely that mechanical motions such as walking or driving upon this material would sufficiently pulvarize it to be respirable.

During the course of the interviews and inspections of the work area by the NIOSH Industrial Hygienists, it was noted that many substances of a highly toxic nature are handled by the dock workers, and that an occasional spill of these materials could result in a serious exposure. Upon inquiring about respirators, it was found that, while there were supposedly a dozen respirators avaliable, only one could be produced, along with some dust masks and one self-contained chemically supplied oxygen "Chemox" respirator which was locked in a storage room.

C. Recommendations

Since the most common complaint of the employees was concerning spills of various cargoes, and since exposure to some of these spills is potentially hazardous, it is suggested that a plan be instituted whereby the employees have available to them protective equipment including respirators (with a variety of cartridges, including toxic dust, acid gas, organic vapor, ammonia, and mercury), gloves, and coveralls. It is also recommended that the "Chemox" respirator be stored in a place where it would be readily available. Employees should then be instructed to try to determine the type of spill and take appropriate precautions. The use of industrial type vacuum cleaners would also decrease the exposure to employees cleaning up spills, since this method does not cause the material to become airborne as sweeping does; and also is faster than sweeping and thereby decreases exposure time.

V. AUTHORSHIP AND ACKNOWLEDGMENTS

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