

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

HEALTH HAZARD EVALUATION DETERMINATION
REPORT NO. 73-166-131

DRAPER PET SUPPLY COMPANY
SPRINGFIELD, MASSACHUSETTS

APRIL 1974

I. TOXICITY DETERMINATION

It was determined by a NIOSH investigator that no health hazard existed from exposure to solvent vapors, normal propyl alcohol and ethyl acetate at the time of the survey at the Draper Pet Supply Company. It should be pointed out, however, that the survey was conducted during December when exterior windows were closed. During the summer months a window-mounted air conditioner is used to cool the offices at the Draper Pet Supply Company. Air is drawn from the outside of the building. The air conditioner is mounted one story above the exhaust of the ventilation system from the presses of the Trantex Corporation located on the lower floor. In the opinion of the NIOSH investigator, a nuisance if not a potential health hazard could exist under summer working conditions. However, this is an opinion since air samples have not been obtained during the hot weather months when solvent vapors may enter the building.

II. DISTRIBUTION AND AVAILABILITY OF DETERMINATION REPORT

Copies of this Determination Report 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) Draper Pet Supply Company, Springfield, Massachusetts
- b) U. S. Department of Labor - Region I
- c) NIOSH - Region I

For the purpose of informing the affected employees the employer will 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. 699(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.

The National Institute for Occupational Safety and Health, (NIOSH) received such a request from an employer of the Draper Pet Supply Company to evaluate the potential hazards associated with solvent vapors considered to enter the building from a business using solvents on a lower floor.

IV. HEALTH HAZARD EVALUATION

A. Description of Work Areas

The Draper Pet Supply Company is a wholesale supply house for pet supplies. Numerous aquariums are used to grow tropical fish. The pet supply warehouse and aquariums are located on the second floor of a brick and masonry building. Normal propyl alcohol and ethyl acetate are used in a manufacturing process by another company on the first floor. Solvent vapors are exhausted from the first floor on two sides of the building directly to the outside. The exhaust outlets for the solvent vapors are located on the first floor at a height of about 5 feet above ground level. Offices of the Draper Pet Supply Company are located on the second floor above these exhaust outlets. Three work areas were identified at the Draper Pet Supply Company, namely, the office areas on the outside walls, a general pet supply customer service area located in the corner of the building and a large room which houses the aquariums located in the center of the building. Seven persons work in the warehouse and office areas.

B. Worksite Evaluation

On December 12-13, 1973, air samples were collected on charcoal tubes to evaluate exposure of employees to solvent vapors. A total of nine samples were collected in the areas mentioned previously. Only small quantities of solvent vapor were detected in any of these areas, refer to Table I. Employees were interviewed in a non-directive manner. At the completion of the plant site evaluation, an exit interview was held with the employer to discuss the survey.

C. Evaluations

The determination that no health hazard existed at the time of the survey is based upon an analysis of air samples collected in the work areas during the survey. The opinion that a nuisance or potential health hazard could exist during warm weather months when windows are opened or the air conditioner draws outside air into the building, is based upon the interviews conducted with the employees at the Draper Pet Supply Company and the professional judgement of the NIOSH investigator. Employees working in the office areas complained of nausea and headaches which may be related to exposure to the solvent vapors. Once again, however, it should be pointed out that samples have not been collected during high exposures to solvent vapor. Employees indicated that the odor of solvent vapor was less than it used to be and therefore, did not bother them as much.

D. Evaluation Criteria

The occupational health standard promulgated by the U.S. Department of Labor (Federal Register, October 18, 1972, Title 29, Chapter XVII, Subpart G, Table G-1) applicable to the individual substance of this evaluation is as follows:

<u>Substance</u>	<u>p.p.m.</u>
Ethyl Acetate	400
Propyl Alcohol	200

V. AUTHORSHIP AND ACKNOWLEDGMENTS

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TABLE I
AIR CONCENTRATIONS OF SOLVENT VAPORS

<u>Location</u>	<u>Time</u>	<u>Date</u>	<u>Ethyl Acetate (ppm)</u>	<u>N-Propyl Alcohol (ppm)</u>
Office 1	9:40-12:20	12-12-73	0.7	N.D.
"	12:20- 3:40	"	1.8	N.D.
"	9:30-12:10	12-13-73	0.4	N.D.
Office 2	10:55-12:20	12-12-73	1.5	N.D.
"	12:20-3:40	"	1.7	N.D.
"	9:30-12:10	12-13-83	0.3	N.D.
Fish Aquarium Room	9:42-12:20	12-12-73	2.7	N.D.
"	12:20- 3:40	"	1.0	N.D.
"	9:30-12:30	12-13-73	N.D.	N.D.

ppm - parts of vapor per million parts of contaminated air by volume
N.D. - None Detectable