

**DATE:** September 23, 1992

**FROM:** Fatal Accident Circumstances and Epidemiology (FACE) Project  
Minnesota Department of Health (MN FACE)

**SUBJECT:** FACE Investigation MN9205  
Storeroom Manager Dies From Complications Arising After a Fall on a  
Level Surface

## **SUMMARY**

A 71-year-old male storeroom manager (victim) died as a result of complications arising from a fall on a level surface approximately one month after the incident. The fall occurred outside during late winter on a concrete and asphalt surface near gas pumps. There was melting ice and snow present in the vicinity of the pumps on the day of the fall. In addition, the gas pump hoses were long and laid in disarray on the ground. There were no witnesses to the incident, but he apparently slipped or tripped and hit his head. MN FACE investigators of the Minnesota Department of Health concluded that, in order to prevent similar occurrences, the following guidelines should be followed:

- > outside work areas should be kept free of ice during the winter months; and
- > long hoses should be hung or neatly stored on the ground.

## **INTRODUCTION**

A March 16, 1992, work-related death of a storeroom manager came to the attention of MN FACE personnel while reviewing death certificates on June 5, 1992. The victim's employer was contacted June 8, 1992, and a site investigation was conducted June 11, 1992.

The victim worked as a storeroom manager for an organization employing 48 full-time, year-round employees. He had been employed in this position for twelve years. The organization employs a safety officer, has written safety rules and procedures, regularly presents safety videos (lifting, CPR procedures, fire, and general safety attitude), and holds safety round-table discussions.

## **INVESTIGATION**

The incident occurred outdoors in morning light, during the late winter. It was reported

that melting snow and ice were on the ground on the day of the incident. The victim mentioned to a co-worker that he felt tired and wanted some fresh air. He decided to walk some purchase orders over to an administration building, approximately 120 yards south from the service building where he worked. It is probable that the victim had rubber, winter boots on.

There were no witnesses to the incident. An employee across a boulevard, however, saw him standing near some gas pumps, approximately 40 yards north from his workplace. Four parking posts, approximately four feet in front of them, protected the pumps. A parked truck partially obstructed the view of the nearby employee. When she looked again, the victim was not seen. She investigated and discovered him on the ground between a gas pump and parking post. He was unconscious and had apparently slipped or tripped and severely bumped his head. A large bump or "goose egg" was evident on the back of his head after the fall.

A 911 call was placed and fire and paramedic personnel responded. The victim recovered consciousness by the time first-responders got to the scene and did not require any life support procedures. He was transported to a hospital emergency room where it was determined that he suffered from subdural hematoma. The victim experienced speech difficulties and memory loss throughout the month after the incident. He was re-admitted to the hospital twice during this time period. He died as an inpatient approximately one and one-half months after the fall.

A slightly inclined, curved, sidewalk led from the service building down to the gas pumps. A short curb, approximately 2 inches high, followed the sidewalk down to the pumps. At the pump location the sidewalk and the roadway were level, and there was no curb in the immediate vicinity of the incident. Photographs of the site taken after the incident showed that, although the sidewalk leading to the gas pumps was clear, there was ice buildup near the pumps. In addition, it was noted during the site visit that extremely long gas pump hoses were lying on the ground around the pumps.

## **CAUSE OF DEATH**

The cause of death listed on the death certificate was multiple pulmonary emboli due to arteriosclerotic heart disease due to subdural hematoma. Other significant conditions listed as contributing to death but not resulting in the underlying cause given above was subdural hematoma secondary to trauma.

## **RECOMMENDATIONS/DISCUSSION**

**Recommendation #1:** Outside work areas should be kept free of ice during the winter months. This recommendation is in accordance with Minnesota Rules §5205.0660, Sub p.2, which states that walkways shall be maintained in a condition free from the hazards associated with ice, snow, holes, loose members, or deteriorated or corroded members.

**Discussion:** Although it is not known why the victim was at the gas pump station, ice during winter months is always a slip hazard in Minnesota. Ice associated with outside work areas should be eliminated as far as possible. The placement of salt or sand in these areas would facilitate the melting and clearing of ice and snow.

**Recommendation #2:** Long hoses and other trip hazards should be hung up or neatly stored to reduce the likelihood of trips. This recommendation is in accordance with Minnesota Rules §5207.0250, Sub p. 3, which states that where employees are exposed to tripping hazards, these hazards shall be barricaded, guarded, or otherwise covered.

**Discussion:** The hoses on the gas pumps appeared to be exceptionally long and, during the site investigation, were sprawled haphazardly across the ground. This trip hazard could be reduced by hanging the hoses on clips or hooks on the pumps, or more neatly storing them on the ground in an "out-of-the-way" (perhaps between pumps) location. Shorter hoses which hang only to the bottom of the pumps could be considered as well, but because of the parking posts, it may be necessary for drivers to adopt specific parked positions for their vehicles while gassing up.

## **REFERENCE**

1. Minnesota Labor and Industry, Occupational Safety and Health Standards, Chapters 5205, 5206, 5207, 5210, 5215, Extract from 1991 Minnesota Rules §5205.0660, Sub p. 2, and §5207.0250, Sub p. 3. St. Paul, Minnesota.