The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research NIOSH

Cleaning Maid Dies in Ohio Following a 12-foot Fall Through a Floor Opening

FACE 9127

SUMMARY

A 71-year-old cleaning maid (victim) fell 12 feet to her death through an unguarded floor opening. At the time of the incident, an access door to a lower-level boiler room had been left open in the floor of the hall to the men's showers; a maintenance mechanic was servicing the heating plant for the municipal swimming pool. The cleaning maid, who was walking backwards as she mopped down the floor to the men's showers, backed into the access door opening and fell about 12 feet onto the cement floor below. The victim was transported to the trauma center of a hospital in a neighboring state where she died 7 days later from injuries sustained in the fall. NIOSH investigators concluded that, to prevent future similar occurrences, village and municipal administrations should:

- **implement 29 CFR 1910.23 (a)(3)(i), which requires that every hatchway floor opening shall be guarded by a hinged floor opening cover of standard strength and construction equipped with standard railings or permanently attached thereto so as to leave only one exposed side. When the opening is not in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings**
- **develop, implement, and enforce a comprehensive safety program that includes, but is not limited to, training and educating employees in the proper methods of covering/guarding floor openings, and of surveying work areas prior to beginning work, to prevent falls through openings**
- **conduct scheduled and unscheduled safety inspections to ensure that safety procedures are being followed.**

INTRODUCTION

On July 26, 1991, a 71-year-old cleaning maid fell 12 feet through an open floor-level access door. On August 5, 1991, officials from a Pennsylvania Coroner's Office notified the Division of Safety Research (DSR) of the victim's subsequent death on August 2, 1991, and requested technical assistance. On August 21, 1991, a supervisory industrial hygienist traveled to the incident site to conduct an investigation. The incident was reviewed with representatives from the village. Photographs of the incident site and a copy of the death certificate were obtained.

The village involved in this incident had been incorporated for 79 years and provided various services, including parks and the municipal swimming pool. The village employed 37 to 47 workers, including 7 regular full-time and 30 to 40 part-time laborers. The village had no written safety policy, designated safety director, nor written safety program. The victim had worked as a cleaning maid for the village for 8 years 3 months.

INVESTIGATION

The village had a municipal swimming pool constructed in a structure shared with the municipal fire department. The swimming pool was serviced each day by two cleaning maids who mopped floors and performed other janitorial work. On Mondays, Wednesdays and Fridays, a mechanic from the village would arrive before doors opened to the public to add chlorine to, and service the filters and boilers on, the pool water system.

On the day of the incident, both cleaning maids were mopping the men's locker room when the mechanic stopped in to let them know that he would be in and out of the mechanical/maintenance room servicing the pool. The mechanic left and the cleaning maids continued mopping the area. One cleaning maid continued mopping into the hall and adjoining ladies locker/shower facilities, while the other cleaning maid (victim) mopped in the other direction through the men's shower facilities into the connecting hallway to the pool area. This hallway also served as the access to the main and lower-level mechanical/maintenance areas of the building.

As the victim was mopping backwards down the hall, she backed into a access opening in the hall floor that had been left open by the mechanic as he traveled to-and-from the pool from the lower-level mechanical room. The victim fell through the opening, and landed on the concrete floor of the mechanical room, 12 feet below. The mechanic, who was working in the mechanical room at the time, heard the fall and immediately summoned the other cleaning maid to call for help. The local emergency medical service (EMS) was called to the scene. Because of the victim's condition, EMS elected to transport the victim by helicopter to a trauma center at a regional hospital. The victim died 7 days later from injuries sustained from the fall.

CAUSE OF DEATH

The death certificate listed the cause of death as blunt force trauma to the head and chest with atherosclerotic cardiovascular disease contributing.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Village and municipal administrations should implement 29 CFR 1910.23 (a)(3)(i), which requires that every hatchway floor opening shall be guarded by a hinged floor opening cover of standard strength and construction equipped with standard railings or permanently attached thereto so as to leave only one exposed side. When the opening is not in use, the cover shall be closed or the exposed side shall be guarded at both top and intermediate positions by removable standard railings. (1)

Discussion: Standard removable railings installed at the location of the open, hinged floor cover would prevent someone from walking directly into an opening and falling through. Entry through a swinging gate or offset in the railing would prevent direct, inadvertent access to such an opening.

Recommendation #2: Village and municipal administrations should develop, implement, and enforce a comprehensive safety program that includes, but is not limited to, training and educating employees in the proper methods of covering/guarding floor openings, and of surveying work areas for hazards prior to beginning work, to prevent falls through openings.

Discussion: Whenever a floor-level opening is left uncovered/ unguarded, there is a danger of falling through that should be controlled by some type of barrier or temporary cover. A warning sign could be used to provide additional protection. It is also inherently unsafe to work backwards into an area that has not first been surveyed for hazards. A comprehensive safety program based upon job safety analyses for all village work positions should be developed and implemented.

Recommendation #3: Employers should conduct scheduled and unscheduled safety inspections regularly at each jobsite.

Discussion: To be effective, a safety program must be enforced at the worksite. Regular safety inspections demonstrate to workers that the village or municipality is committed to enforcing its safety policies and procedures. These inspections also provide opportunity to observe previously unidentified hazards and implement appropriate preventative or intervention controls. Assessments of occupational safety and health hazards as addressed by federal and state standards should be an active part of this safety inspection process.

REFERENCE

1. Office of the Federal Register: Code of Federal Regulations, Labor 29 Part 1910. p. 98. July 1, 1990.

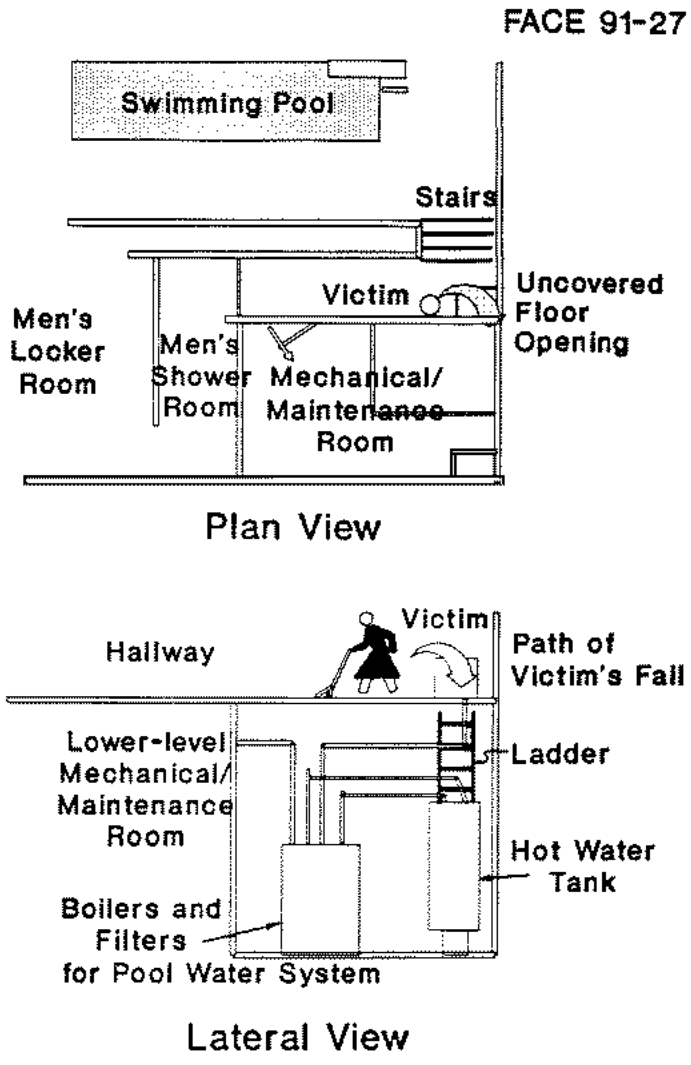

Figure.

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Last Reviewed: November 18, 2015