Maintenance Inspector Dies After Falling 36 Feet Down an Elevator Shaft

DATE: January 7, 1992

SUMMARY

On October 17, 1991, a 44 year-old male maintenance inspector died after falling 36 feet down an elevator shaft. The incident occurred while the victim was inspecting an unoccupied office building for damage. The victim apparently opened the elevator hatchway door on the fourth floor of the building and fell while he was looking into the shaft. NJDOH FACE investigators concluded that, in order to prevent similar incidents in the future, the following safety guidelines should be followed:

- ***Building owners should insure that elevators in unoccupied buildings are properly placed out of service to prevent entry or use.***
- ***Employers should provide a communication system and emergency assistance plan for employees who work alone.***

INTRODUCTION

On October 18, 1991, NJDOH FACE personnel were notified by the area OSHA safety supervisor of a work-related fatal fall that occurred the previous day. On November 6, FACE investigators visited the site to interview the employer representative and photograph the scene. Other information was derived from the OSHA compliance officer, police report, and medical examiner's report.

The employer is a small real estate development firm who has been in business for eight years and employed ten people, one as a part-time maintenance inspector. The victim was a 44 year-old male who had been employed as the maintenance inspector for three years. He had been hired to check on an unoccupied office building that was being managed by the firm. The victim was very familiar with the building, having previously worked there for 15 years as the building's maintenance supervisor. At the time of the incident, he was also working full-time as a maintenance supervisor for another company.

INVESTIGATION

The incident occurred inside an office building that had been closed since 1988 due to financial problems. To reduce maintenance costs, the electricity had been disconnected two months earlier, leaving the building without power and lights. The building was four stories high, consisting of three floors of office space and a fourth floor penthouse which contained the ventilation and mechanical equipment. The building was serviced by two hydraulic elevators, only one of which reached the fourth floor. Both elevators were inoperable at the time of the incident, and the cars were located on the first

floor. The victim's duties were to inspect the interior and exterior of the building and report any damage to the real estate firm. The victim usually checked the building twice a week, and occasionally did light maintenance work such as replacing broken windows.

There were no witnesses to the incident. It was raining heavily when the victim dropped his wife off to work at about 8 a.m., telling her that he was going to check on the office building before going to his full-time job. When the victim was two hours late for work, his co-workers became concerned and telephoned his wife who stated that he went to check the office building. The co-workers then called the police and asked them to check on the victim.

The police arrived at the office building at 11:26 a.m. and found the victim's car parked in front. After finding the front door unlocked, they made a search of the first two floors of the building before a second unit arrived with a police dog. While searching with the dog, the police found that one of the fourth floor stairway doors had been wedged open with a board. Approximately 15 feet away was the elevator with its hoistway doors open. Using a flashlight to look down the shaft, they saw the victim lying on top of the elevator car 36 feet below. When the police found the victim unresponsive to verbal commands, they tried unsuccessfully to reach him by opening the second floor elevator doors. The local rescue squad arrived and forced the second floor elevator doors open and a physician climbed down to examine the victim. The physician pronounced the victim dead at the scene.

A mechanical examination of the elevator the next day by the police and OSHA found an elevator key, flashlight, and heel of the victim's shoe underneath the elevator car. A mechanical examination of the fourth floor elevator hoistway doors found that the doors were stuck open due to lack of lubrication. From this evidence, it appears that the victim was walking through the building when he deciding to check on the mechanical room. He climbed the stairs to the fourth floor, either wedging the door open with the board or walking through the previously wedged door. Unlike the office floors below, the fourth floor did not have windows and was pitch black. The victim then used his elevator key to open the hoistway doors, possibly to check for water leaking into the shaft. While the doors were open he fell into the shaft, possibly as he was looking into it with the flashlight or while he was trying to close the stuck hoistway doors.

CAUSE OF DEATH

The cause of death was attributed to bilateral pneumothorax with traumatic fractures of the ribs and pelvis.

RECOMMENDATIONS AND DISCUSSION

Recommendation #1: Building owners should insure that elevators in closed buildings are properly placed out of service to prevent entry or use.

Discussion: To prevent inadvertent entry or use of a closed elevator, it is recommended that all unused elevators should be placed out of service. The American National Standards Institute (ANSI) defines an out of service hydraulic elevator as one whose power lines have been disconnected, where the elevator car rests at the bottom of the hoistway, and whose hoistway doors are permanently sealed or barricaded

in the closed position. If so equipped, the suspension ropes should also be removed and the counterweights allowed to rest at the bottom of the hoistway.

Recommendation #2: Employers should provide a communication system and emergency assistance plan for employees who work alone.

Discussion: In cases where an employee may be alone and injured or disabled, the employer should set up a communications system where the employee can request assistance in case of an emergency. Some examples of communications systems are:

- Use of a portable radio or cellular phone.
- A call-in system in which the employee notifies someone before entering and after leaving a building.
- Use of existing emergency systems, such as activating fire or burglar alarms that are linked with the police.

REFERENCES

1. Code of Federal Regulations 29 CFR 1926, 1989 edition. U.S. Government Printing Office, Office of the Federal Register, Washington DC. pg 162
2. ANSI/ASME A17.1-1981, Safety Code For Elevators and Escalators. The American Society of Mechanical Engineers, New York, NY. pg 5

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