

Plumber Dies After Falling 13 Feet Into A Stairwell While Repairing a Pipe

DATE: May 28, 1993

SUMMARY

On October 1, 1992, a 41 year-old male plumber was fatally injured after a 13 foot fall into a stairwell. The incident occurred at a large resort hotel while the victim was repairing a leaking water pipe located above the ceiling in a stairwell. After climbing a scaffold to reach the ceiling, the victim was sitting on a large adjacent pipe when he apparently slipped off the pipe, fell through the ceiling, and landed on the stairs. He died of his injuries the next day. NJDOH FACE investigators concluded that, in order to prevent similar incidents in the future, employers should adhere to the following safety guidelines:

- **Ensure that scaffolds are properly erected and positioned before allowing employees to work from them.**
- **Ensure that fall protection is provided and used by workers who may be exposed to fall hazards.**
- **Develop, implement, and enforce a comprehensive safety program that is administered by a competent safety officer.**

INTRODUCTION

On October 5, 1992, NJDOH FACE personnel were notified by the OSHA area safety supervisor of a work-related fatal fall that occurred three days earlier. After discussion with the hotel management, FACE investigators were permitted to visit the site following completion of the OSHA investigation and the hotel's internal investigation. The FACE site visit was conducted on January 14, 1993 at which time we interviewed the employer representative and photographed the scene. Other information on the incident was obtained from written witness statements, the OSHA file, and the county medical examiner's report.

The employer was a large resort hotel located in a urban area. The hotel employed approximately 6,000 workers, including a staff of 14 plumbers. Although the hotel did not have a safety officer, it did have a management safety committee for addressing complaints and an employee safety committee whose meetings are open to all employees. The hotel had a limited job and safety training program for the skilled trade workers because they were hired as trained journeymen through the union halls. The victim was a 41 year-old male journeyman plumber who had been hired from the union hall. He had worked for the hotel for over two and a half years.

INVESTIGATION

The incident occurred indoors in a stairwell on the ground floor of the hotel. At about 10 p.m. on the night of September 30, someone noticed water leaking from a stairwell near the hotel lounges. The day shift lead plumber assessed the damage and found that the joint to a 4-inch copper hot water pipe had broken in the ceiling above the stairway. At 10:30 p.m., the lead plumber called the victim and a second plumber (who both normally work the day shift) in to do the repair. After the water was turned off, the facility carpenters were assigned to build a tubular steel scaffold in the stairwell. The carpenters built the scaffold, positioning the top planks about four feet down from the roof of the ceiling. They also opened the sheetrock ceiling near the broken pipe. The lead plumber had the carpenters adjust the scaffold to increase the size of the work platform.

At about 11-11:30 p.m., the victim and plumber #2 arrived and met the lead plumber. The three men loaded a tool wagon and went to the stairwell where the scaffold had been assembled. Plumber #2 proceeded up the scaffold to cut and sand the broken pipe while the victim returned to the shop to get a tool. At that time, the lead plumber went to the boiler room to make sure the water valves were closed. The victim returned, handed the tool up to plumber #2, and climbed the scaffold. Plumber #2 then descended the scaffold to cut a length of replacement pipe while the victim soldered a gate valve to the pipe. At about 1 a.m., plumber #2 completed his cut and asked the victim if he was OK, to which the victim replied "no problem". Plumber #2 then heard some noise and looked up to see the victim falling feet first through the ceiling. The victim fell 13 feet onto the stairs, landing on his feet and striking his back and head on the stairs. Plumber #2 (and several nearby persons who responded to the noise) immediately went for help. The company nurse responded, followed within four minutes by the ambulance and paramedics. The victim, who was semi-conscious and responsive to basic questions, was transported to the local hospital. He died the following day, 30 hours after the incident.

The victim was apparently sitting on a cast iron pipe near the break in the copper pipe, which was located about two feet away from edge of the scaffold. The noise immediately prior to the incident suggests that he may have dropped a tool or slipped before falling through the ceiling. The plumbers apparently had also moved the planks to the top of the scaffold, to a height within a foot of the ceiling, possibly to get closer to the broken pipe.

CAUSE OF DEATH

The county medical examiner attributed the cause of death to internal hemorrhage due to a fracture of the pelvis.

RECOMMENDATIONS AND DISCUSSION

Recommendation #1: Employers should ensure that scaffolds are properly erected and positioned before allowing employees to work from them.

Discussion: In this situation, it appears that the scaffold had not been positioned directly under the broken pipe. After the plumbers moved planks on the scaffold, the victim climbed into the ceiling to sit on the iron pipe he apparently slipped off of. To prevent incidents of this type, all workers who use

scaffolds should be trained in erecting, positioning, and properly using the scaffold. This fatality may have been prevented if the victim had been working from the stable scaffold platform.

Recommendation #2: Employers should ensure that fall protection is provided and used by workers who may be exposed to fall hazards.

Discussion: The potential for a serious fall existed as soon as the victim climbed off the scaffold and into the ceiling. In cases where a suitable work platform can not be built or positioned, all employees working at elevations should be provided with appropriate fall protection equipment. A properly secured safety belt and lanyard may have been appropriate for this situation if the scaffold could not be properly positioned.

Recommendation #3: Employers should develop, implement, and enforce a comprehensive safety program that is administered by a competent safety officer.

Discussion: The hotel in this incident had thousands of employees involved in a variety of skilled and unskilled trades. Although they did have safety programs, these programs varied from department to department and were generally uncoordinated. We recommend that the hotel should develop, implement, and enforce a comprehensive safety program that includes (but is not limited) to scaffold safety and use of fall protection. This program should be administered by a competent safety officer who has the proper training, background, and experience to recognize potential safety hazards in the workplace. The safety officer should have close ties with the safety committees and a working knowledge of occupational safety and health practices and standards.

REFERENCES

Code of Federal Regulations 29 CFR 1910, 1990 edition. U.S. Government Printing Office, Office of the Federal Register, Washington DC. pg 117

Scaffold Safety Regulations and Inspection Check List. Safway Steel Products, Milwaukee WI.

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