The National Institute for Occupational Safety and Health (NIOSH)

Worker Falls 25 Feet to His Death From an Extension Ladder in New Jersey

New Jersey Case Report: 90NJ016 (formerly NJ9012)

DATE: February 26, 1991

SUMMARY

On September 17, 1990, a 73-year-old male worker fell 25 feet to his death. An experienced handyman in reported very good health, this was his first day of work for a small landscaping company he was to be employed part-time for a few months. The victim stood on an extended aluminum ladder which was positioned against the side of a house covered with aluminum siding. As he reached to his right, with only his left hand and left foot on the ladder, he apparently lost his grip and fell. NJDOH FACE personnel concluded that the following safety guidelines should be followed:

- Safe use of ladders must be practiced;
- If over-reaching or leaning is unavoidable to complete a job, a scaffold should be used in place of a ladder;
- Ladders and all other equipment should be maintained in good working condition.

INTRODUCTION

FACE project personnel of the New Jersey Department of Health learned about this work-related fall from an OSHA safety supervisor. On September 19, 1990, the site of the fatality was visited, the ladder inspected, and photographs were taken. A NJDOH FACE investigator discussed the incident with the employer. Information about the witness' statement was derived from the OSHA file, the police report, and a telephone interview with the witness.

The victim was retired from his usual employment and was well known by the employer. He had been on the job for approximately three hours when the fatal fall occurred. The employer had been in business for six years and usually worked alone, with no employees. Responding to increased business demands, he planned to employ the victim for a few months, on a part-time basis.

It should be noted that there was some disagreement between investigating agencies as to whether the victim was self-employed or an employee of the landscaping company. The FACE investigation was conducted to identify the risk factors surrounding this fatality and to develop strategies for preventing similar occurrences in the future. Another investigating agency has determined that the victim was self-employed because of his use of personal equipment and because of the agency's technical definitions regarding employment status.

INVESTIGATION

On September 17, 1990, a clear comfortable day, the victim planned to power wash the aluminum siding of a three story house converted into offices. He and a helper (a friend who was not employed by the company) had power washed two sides of the house. At the third side, the victim stood on the ground and wet the siding with water from a hose. He then climbed his own aluminum ladder and used a scrub brush to attempt to remove stains from the siding, to prepare it for washing. The power washing equipment remained on the ground, unused. The victim, who wore loafers with rubber bands on the soles, stood on the extended ladder to clean the siding at the third floor level. His helper steadied the ladder with both hands. The ladder rested on an asphalt drive way. The victim, who was left handed, used the scrub brush in his right hand. He periodically transferred the brush to his left hand, dropped it down to his helper who rinsed it and threw the brush back to the victim, who caught it in his left hand. The deceased then transferred the brush to his right hand. Trying to clean an area on the siding to his right, which was beyond his reach, the victim removed his right foot from the ladder and let it dangle on the right side on the ladder. He maintained a grip on the ladder with his left hand on one rung and his left foot on a lower rung. The assistant cautioned him about being careful. The victim, who apparently lost his grip, fell to the right side on the ladder, landing almost upright on a small overhang roof, 15 feet below. From the overhang he rolled off onto the driveway, 10 feet below the overhang roof. The victim never called out as he fell. The helper maintained his hold on the ladder even after the victim's fall, and then threw the ladder to the ground.

Help was summoned immediately. The local rescue squad and mobile intensive care unit paramedics responded to the scene. The victim, who regained consciousness after about 30 seconds, was transported by rescue squad to a helicopter landing pad and was then taken by helicopter to the regional trauma center. Although he was given advanced emergency treatment at the trauma center, he was pronounced dead in the emergency room.

Although the ladder, owned by the deceased, was in generally good condition, the rubber pad on each foot of the ladder was quite worn, with little rubber remaining. The right foot of the ladder was able to move in two planes.

Normally able to swivel back and forth, the right foot was also able to move laterally, toward the outside of the ladder. It is unknown if these factors may have contributed to the victim's fall.

CAUSE OF DEATH

The medical examiner determined that death was caused by multiple traumatic injuries.

RECOMMENDATIONS/DISCUSSIONS

Recommendation #1: Basic safety must be practiced when using any ladder.

Discussion: Safe ladder use includes avoiding over-reaching, leaning to one side, or standing on one foot. One's body should be kept centered while working on the ladder.[1]

Recommendation #2: Use a scaffold in place of a ladder when necessary.

Discussion: If reaching or leaning beyond a safe area are necessary to complete a job, a scaffold should be substituted. A scaffold would provide a safer working platform when a large working area is needed.

Recommendation #3: Ladders and all other equipment should be maintained in good working condition.

Discussion: Although it is unknown if the worn condition of the feet of the extension ladder was a contributing factor in this fall, safety mandates keeping all parts of a ladder in good condition.

REFERENCES

1. Ladder Selection and Safety Tips In Best's Safety Directory, Volume II (pp. 1553-1559).

FATAL ACCIDENT CIRCUMSTANCES AND EPIDEMIOLOGY (FACE) PROJECT

Staff members of the FACE project of the New Jersey Department of Health, Occupational Health Service, perform FACE investigations when there is a work-related fatal fall or electrocution reported. The goal of these investigations is to prevent fatal work injuries in the future by studying: the working environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact.

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