FACE 90-07

Laborer Dies After Fall From Ladder in South Carolina

SUMMARY

A masonry contractor had been contracted to construct a life center building across the road from a hospital complex. A construction laborer (victim) had been instructed by his foreman to prepare a batch of mortar on the second level of a new construction project, and carry it to the third level. The mortar was carried by pails from the second level via stairs to the third level. For some unknown reason, the victim decided to use the top section of an aluminum extension ladder (without safety feet). He placed one end of the ladder on the wet concrete floor, leaned the other end against a wall, and started to climb. The ladder apparently slipped on the wet floor causing him to fall approximately 12 feet. NIOSH investigators concluded that, in order to prevent future similar occurrences, employers and employees must:

- ensure that ladders are used in accordance with existing safety standards
- instruct workers that upper sections of extension ladders should not be used as single ladders
- train employees in the proper use of tools and equipment needed to perform their assigned tasks
- designate an individual as the company safety officer to visit the various jobsites, identify potential hazards, and ensure that those hazards are eliminated.

INTRODUCTION

On September 21, 1989, a 46-year-old male construction laborer fell while climbing a ladder. He died on September 24, 1989, from injuries sustained in the fall.

On October 11, 1989, the South Carolina Occupational Safety and Health Administration notified the Division of Safety Research (DSR) of the incident and requested technical assistance.

On October 19, 1989, a DSR safety engineer conducted an investigation. The investigator visited and photographed the incident site, reviewed the case with company officials, talked with employees who were present at the time of the incident, and contacted the county medical examiner's office for information about the incident.

The employer is a masonry contractor who has been in business for 30 years and has 267 employees. Although the company has written safety rules and procedures and company

officials conduct regular safety meetings, it has no company safety officer. The company places a safety flier in the weekly pay envelope to try to keep the employees aware of proper safety practices. Safety information is primarily conveyed via on-the-job training. The victim had worked for the employer for about 12 months as a laborer prior to this incident.

INVESTIGATION

A masonry contractor had been contracted to construct a life center building across the road from a hospital complex. At the time of the incident, the victim was preparing a batch of mortar as instructed by the foreman. The victim's duties included mixing mortar and transporting it to the desired location in pails. The rest of the crew, including the foreman, went up to the third level of the building, which was about 12 feet above the second floor where the victim was working. The workers used a stairway to access the third floor work area.

Although no one saw the victim fall, evidence at the site suggested that the victim took the top portion of an aluminum extension ladder (without safety feet), placed one end on the wet concrete floor, and leaned the other end against a wall to reach the third floor area. Without attempting to tie off the ladder or secure it in any fashion, the victim began to climb the ladder. The bottom of the ladder apparently slipped on the wet floor, causing the victim to fall. There were no indications at the scene that the victim was carrying a pail of mortar when he fell.

The victim was discovered by an employee of another contractor on the site. This individual said that the victim was conscious, but was talking incoherently and bleeding from his ears. By the time the emergency rescue squad arrived 15 minutes after the fall, the victim had lost consciousness. He was transported to the hospital where he died 3 days later.

During the interviews, the employer could offer no reason why the victim used the ladder, which belonged to another contractor, instead of the stairway to access the work area. The general contractor stated that the victim's employer did not have any extension ladders at the jobsite. There was no indication that the victim had used a ladder in this way prior to the incident. The incident occurred on the employer's last day of work at the site.

CAUSE OF DEATH

The medical examiner's report listed multiple traumatic injuries sustained from the fall as the cause of death.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should ensure that ladders are used in accordance with requirements of existing Federal safety standards.

Discussion: Occupational Safety and Health Administration (OSHA) construction standards require that the base, or feet, of portable metal ladders be placed on a substantial base (1926. 450(a)(6)); that they be set up at a proper angle (1926.450 (a)(7)); and that ladders in use be tied, blocked, or otherwise secured to prevent displacement (1926.450(a)(10). Employers should be familiar with the Federal safety standards that apply to their businesses, including those that relate to the tools and equipment they use.

Recommendation #2: The upper sections of extension ladders should not be used as single ladders.

Discussion: Although referring to wooden sectional ladders, 29 CFR 1910.25(d)(2)(xvii) (which is a General Industry Standard) prohibits the use of top sections of such ladders unless equipped with safety feet. It would be prudent to follow this requirement whether the ladder is wooden or metal. The upper sections of extension ladders are not regularly equipped with safety feet and are not intended to be used as single ladders. Using sections of extension ladders in this manner creates potential hazards that can result in serious injuries or death.

Recommendation #3: Employers should train workers in the proper use of tools and equipment used to perform their assigned tasks.

Discussion: Had the victim been trained in the proper use of ladders, he would have known to use a ladder with safety feet, to place it at a safe angle, and to secure the ladder in compliance with existing standards. The victim placed a ladder without safety feet on a wet surface and did not secure it before starting to climb the ladder. A review of safety procedures involving ladders would be a good topic for a training session at a company safety meeting. Training sessions should be conducted and documented by company officials.

Recommendation #4: The employer should designate an individual as the company safety officer.

Discussion: At present the safety function is not overseen by one individual. Assigning one individual the responsibility for coordinating all of the safety activity of the company would most likely result in a better overall safety program. The company safety officer should be required to routinely visit the various jobsites, identify potential hazards, and ensure that those hazards are eliminated. This person should also discuss pertinent safety issues with the foreman on the jobsite on a regular basis.

REFERENCES

1. 29 CFR 1926.450(a)(6) Code of Federal Regulations, Washington, D.C.: U.S. Government Printing Office, Office of the Federal Register

2. 29 CFR 1926.450(a)(7) Code of Federal Regulations, Washington, D.C.: U.S. Government Printing Office, Office of the Federal Register

3. 29 CFR 1926.450(a)(10) Code of Federal Regulations, Washington, D.C.: U.S. Government Printing Office, Office of the Federal Register

4. 29 CFR 1910.25(d)(2)(xvii) Code of Federal Regulations, Washington, D.C.: U.S. Government Printing Office, Office of the Federal Register