The National Institute for Occupational Safety and Health (NIOSH)

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Roofer Falls to His Death from a Roof in Maryland

FACE 8807

INTRODUCTION

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), performs Fatal Accident Circumstances and Epidemiology (FACE) investigations when a participating state reports an occupational fatality and requests technical assistance. The goal of these evaluations 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.

On November 16, 1987, a 41-year-old male roofer died when he fell from roof framing to a concrete floor 22 feet below.

CONTACTS/ACTIVITIES

Officials of the Occupational Safety and Health Program for the State of Maryland notified DSR of this fatality and requested technical assistance. On December 11, 1987, a DSR research team met with employer representatives to review this incident. Prior to a field investigation, DSR personnel discussed this incident with personnel from the Maryland Occupational Safety and Health Administration.

OVERVIEW OF EMPLOYER'S SAFETY PROGRAM

The victim was employed by a roofing company which presently employs 45 persons and has been under the same management since it began operation 4 years ago. The victim had worked for the employer for 2 years prior to the incident and had approximately 20 years experience as a roofer. The employer has a written safety program and employees receive both written and verbal safety instruction. In addition, safety programs on videotape are presented to employees on days when weather or other conditions preclude exterior work.

SYNOPSIS OF EVENTS

On the day of the incident, the victim was working with a co-worker to install roof decking panels on a new building. Four other workers were installing the overlying roofing material on another area of the roof.

The decking panels being installed by the victim were composed of wood fiber and portland cement. Each panel was 32 inches wide by 8 feet long by 2 inches thick and weighed 80 pounds. A tongue-and-groove system on the 32-inch ends permitted the interlocking of adjacent panels. Framing material consisted of 4-inch " I " beams on 5-foot centers, with 1 7/8-

inch-wide inverted “T”-shaped purlins, 32 inches apart, forming the support for the decking panels.

At the time of the incident, the victim was standing with one foot on a panel which had already been installed and his other foot on one of the 1 7/8-inch purlins. He was pushing on one end of an 8-foot panel to force the tongue to engage the groove on the adjacent panel. His co-worker was at the far end of the panel guiding it into the groove. According to the co-worker’s statement to Maryland OSHA, the panel suddenly dropped into place, and this action may have caused the victim to lose his balance. The co-worker looked up and saw the victim fall through a gap in the framing. The victim fell approximately 22 feet to a concrete floor and experienced multiple injuries to the head and chest. A supervisor standing on the floor below saw the worker falling. No fall-arresting devices such as safety belts, lanyards, or safety nets were present.

Emergency medical service (EMS) personnel were immediately called and were on the scene in approximately 2 minutes. The victim was treated at the scene and enroute to the hospital. The victim was pronounced dead at the hospital 1 hour and 6 minutes after the incident occurred.

CAUSE OF DEATH

The medical examiner’s report stated that death resulted from multiple traumatic injuries.

RECOMMENDATIONS/DISCUSSION

Recommendation: Whenever any work is performed where the potential for a fall from elevation exists, employers should ensure that fall-protection equipment is provided and utilized by their employees.

Discussion: The use of a safety belt/lanyard combination, as required by 29 CFR 1926.104(d), is sometimes not practical during construction operations. However, alternative forms of worker protection, such as the safety nets specified in 29 CFR 1926.105 should be considered. Safety nets can be equally effective in preventing injury or death when a worker falls. The use of safety nets below the workers may have prevented the fatality described above.

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