

MO FACE INVESTIGATION: #94MO120

**SUBJECT: Construction Worker Dies as a Result of an 11-Foot Fall From
Unguarded Residential Deck.**

SUMMARY:

A 46-year-old construction worker died as a result of an 11-foot fall from an unguarded residential deck. The victim was finishing a screen door on the deck when he may have been attacked by stinging insects in the area. In the victim's attempt to escape the area, he fell from the deck and landed on dirt, rocks, and building materials.

The **MO FACE** investigator concluded that in order to prevent future similar occurrences employers should:

- * **install and maintain railings around all open-sided floors, platforms, and runways when the height exceeds four feet.**
- * **develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in hazard recognition and avoidance.**

INTRODUCTION:

On May 24, 1994, at approximately 4:00 p.m., a 46-year-old construction laborer died from injuries sustained in an 11-foot fall from an unguarded residential deck. The company contracted to construct a residence in rural southern Missouri, and employed three construction laborers for this project. The employer had been in the construction business for nine years, and had been at the incident site for one year. The victim had worked at this site for four months. Training for the employees was conducted on the job. The company owner conducted safety meetings when warranted, but these meetings were not of a scheduled or structured format.

The Missouri Department of Health FACE Investigator was notified of the fatality upon receipt of the victim's death certificate. Other records obtained include the hospital medical records and the ambulance trip report.

INVESTIGATION:

The company owner, victim and co-workers, along with several sub-contractors, were constructing a two-story home in rural southern Missouri. At the time of the incident the employer had been on this construction site for one year. The victim had been employed and working at the site for four months. The victim was reportedly a skilled carpenter with a great amount of patience, and had the ability to do fine-detailed work. The victim had customized a set of screen doors for the deck located on the second level of the house. At the time of the incident, he was applying a wood-oil to the doors. The victim may have been attacked by stinging insects and began to escape his work area. It is believed he was backing away from the area and may have tripped over building materials. The victim fell approximately 11-feet, with his head and shoulders striking the ground 11-feet out from the deck's edge. The victim landed on the rocky soil and a large cedar tree trunk that was to be used as a structural support for the house.

— A sub-contractor witnessed the victim moving frantically on the deck before he fell; another co-worker saw him strike the ground. Emergency medical assistance was immediately requested from the house phone while the other workers tried to offer

assistance to the victim. A nearby neighbor with Emergency Medical Technician (EMT) training heard the commotion and responded to the incident site to see if she could be of assistance. While the victim's injuries were being evaluated, he stopped breathing and artificial respiration was begun. Realizing that the victim needed immediate medical attention, his co-workers prepared the bed of a truck with padding to transport him toward the responding ambulance crew by then in route to the scene. During the transport, the victim regained consciousness for a short time, and then lost consciousness again. While traveling from the incident site, the truck met the ambulance crew. The victim's injuries were evaluated and an air ambulance helicopter was summoned. The victim was then transferred approximately six miles to a suitable landing zone. The air ambulance transported the victim to a trauma hospital.

11-feet The victim remained in the Intensive Care Unit for two days, after which the victim was pronounced deceased due to complications of the trauma.

CAUSE OF DEATH:

Severe Head Injury Due to a Fall From a Building's Second Story.

RECOMMENDATION/DISCUSSION:

RECOMMENDATION #1: Railing should be constructed on all open-sided floors, platforms, and runways when the height exceeds four feet.

DISCUSSION: As per 29 Code of Federal Regulations (CFR) 1910.23 (c), **"Protection of open-sided floors, platforms, and runways."** (1) Every open-sided floor or platform four feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.

As per 29 CFR 1910.23 (e) (1), **"Railing, toe boards, and cover specifications."** A standard railing shall consist of top rail, intermediate rail, and posts, and shall have a vertical height of 42 inches nominal from upper surface of top rail to floor, platform, runway, or ramp level.

RECOMMENDATION #2: Employer should develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in hazard recognition and avoidance.

DISCUSSION: Employers should emphasize the safety of their employees by developing, implementing, and enforcing a comprehensive safety program. The safety program should include, but not be limited to, training workers to recognize potential workplace hazards and how to avoid them.

The Missouri Department of Health, in co-operation with the National Institute for Occupational Safety and Health (**NIOSH**), is conducting a research project on work-related fatalities in Missouri. The goal of this project, known as the Missouri Occupational Fatality Assessment and Control Evaluation (**MO FACE**), is to show a measurable reduction in traumatic occupational fatalities in the State of Missouri. This goal will be met by identifying causal and risk factors that contribute to work-related fatalities. The identification of these factors will enable more effective intervention strategies to be developed and implemented by employers and employees. This project does not determine fault or legal liability associated with a fatal incident or with current regulations. All **MO FACE** data will be reported to **NIOSH** for trend analysis on a national basis. This will help **NIOSH** provide employers with effective recommendations for injury prevention. All personal/company identifiers are removed from all reports sent to **NIOSH** to protect the confidentiality of those who voluntarily participate with the program.

REFERENCES:

1. Office of the Federal Register National Archives and Records Administration, Code of Federal Regulations, Labor, 29 CFR 1910.23, 1991.

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St. Louis County Department of Community Health
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The Educational Center on Family Violence
University of Missouri, Agricultural Engineering