



The National Institute for Occupational Safety and Health (NIOSH)

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through safety and health research



Electrician Dies After Fall in South Carolina

FACE 9102

SUMMARY

A 34-year-old male electrician died after falling 12 feet from a scaffold that he was erecting. The victim and a helper were installing conduit for the lighting system in a new shopping mall directly below the steel-beam framework of the building's ceiling. The victim and his helper were using a mobile, aluminum-tubular-frame scaffold with 6-foot-high tiers, to access their work area. After dismantling the scaffold and moving to a location 30 feet from their previous work area, they erected the first tier and locked it in place. The victim erected the second tier of scaffold while the helper returned to the previous location to get some components for the third tier. At the time the helper left, the victim was moving two wooden floorboards from the second tier to the third tier. When the helper returned, he found the victim lying facedown on the concrete floor. The victim was bleeding severely from the nose and mouth, but was conscious. The supervisor at the scene called the job superintendent in the company trailer by two-way radio and told him to call the emergency medical service (EMS). Five minutes after the incident occurred, the victim lost consciousness and no vital signs could be detected. Cardiopulmonary resuscitation (CPR) was initiated immediately by co-workers. The emergency medical service (EMS) arrived 15 minutes after being called and transported the victim to the hospital, where he was pronounced dead on arrival. NIOSH investigators concluded that, in order to prevent future similar occurrences, employers should:

- **provide required personal protective equipment to employees, and ensure that it is used**
- **provide safety training to all new employees**
- **periodically observe the working habits of new employees to ensure that they are accomplishing their assigned tasks in a safe manner.**

INTRODUCTION

On October 11, 1990, a 34-year-old electrician died after falling 12 feet from a mobile scaffold. On October 16, 1990, officials of the South Carolina Safety and Health Administration notified the Division of Safety Research (DSR) of this fatality, and requested technical assistance. On November 8, 1990, two safety specialists from DSR traveled to the incident site to conduct an investigation. The investigators reviewed the incident with the jobsite superintendent, the city police, and the county coroner. Photographs of the incident site and a final report were obtained from the county coroner. The police report was also obtained.

The employer is an interstate electrical contractor that has been in operation 70 years and employs 250 workers. The 17 workers employed at this jobsite included 7 electricians, 8 helpers, 1 supervisor, and the jobsite superintendent. The company hired the electricians and helpers from applications obtained through the local job service. The victim had been on

the job for 2 days. New employees receive a handbook that contains the company safety rules. Weekly tailgate safety meetings are conducted at the jobsite by the job superintendent. The company provides on-the-job training, and funding for employees to attend a certified technical college. The job superintendent is responsible for safety.

INVESTIGATION

The company had been contracted to install the electrical system for a new shopping mall complex under construction. The company had been working at the site for 4 months. On the day of the incident, the victim (an electrician) and a helper were installing conduit directly below the steel-beam framework of the structure's ceiling. The 1/2-inch conduit would encase the conductors for the structure's lighting system. The victim and the helper were using a mobile, aluminum-tubular-frame scaffold to access their work area. The scaffold was three tiers high. Each tier measured 4 feet wide by 8 feet long by 6 feet high. The work area was about 22 feet above ground.

The two men began work at 7:00 a.m., and by 8:00 a.m. were ready to move the scaffold to a new position. The two top tiers were dismantled and the bottom tier unit was moved 30 feet across the concrete floor to a new work area. Once in position, the scaffold's outriggers were put in place and the casters were locked. The men began to re-assemble the top two tiers of the scaffold. The second tier was put in place and the bottom section for the third tier was placed across its top. The victim began to move the two 2-inch by 8-inch by 8-foot floor boards from the second tier to the third tier. He had moved one of the boards when the helper walked to the previous work area to retrieve one of the side sections for the third tier.

When the helper returned, he found the victim lying facedown on the concrete floor. The victim was bleeding severely from the nose and mouth. The supervisor in the area called the superintendent in the company trailer by two-way radio and told him to call the emergency medical service (EMS). Five minutes after the incident occurred, the victim stopped breathing and no vital signs could be detected. Co-workers immediately initiated cardiopulmonary resuscitation (CPR). The EMS arrived 15 minutes after being called and transported the victim to the hospital, where he was pronounced dead by the attending physician.

CAUSE OF DEATH

The coroner listed head trauma as the cause of death.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should provide adequate personal protective equipment and ensure its use.

Discussion: As required by 29 CFR 1910.268(g), safety belts and straps should be provided and the employer should ensure their use when work is performed at heights more than 4 feet above ground.

Recommendation #2: Employers should instruct new employees in the proper methods to be used in the performance of assigned tasks.

Discussion: Employers should ensure that new employees are instructed in the proper methods for performing assigned tasks, such as erecting and working from scaffolds, prior to the initiation of work.

Recommendation #3: Employers should periodically observe the working habits of new employees to ensure that the workers are performing their assigned tasks in a safe manner.

Discussion: Employers should conduct periodic random safety inspections to ensure that employees are performing their assigned tasks in accordance with established safe work procedures. Any violation of safety rules should be corrected immediately.

REFERENCE

29 CFR 1910.268(g), Code of Federal Regulations, Washington, D.C.: U.S. Government Printing Office, Office of the Federal Register.

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