December 17, 1998

Nebraska FACE Investigation 98NE032

**SUBJECT:**

Falling Portable Scaffold Kills Carpenter

**SUMMARY:**

A 37-year-old carpenter was killed when the wooden portable scaffold he was working on collapsed. He was crushed under the scaffold and the load that was on it. The victim and a coworker were both on the scaffold which was on the forks of a hydraulic lift. The lift had the scaffold raised approximately 25 feet. Both individuals were installing sheathing and plywood to the side of an apartment complex when the incident occurred. The load on the scaffold was too heavy for the way it was attached to the hydraulic lift. The wood around the forks of the lift snapped, causing the scaffold and the two individuals to fall. Personnel on site called 911 and the victim was life-flighted to the hospital where he was pronounced dead. The other worker fell clear of the scaffold and was not severely injured. He was transported by ambulance to the hospital.

The Nebraska Department of Labor Investigator concluded that to prevent future similar occurrences:

* Employers should not use “homemade” scaffolds on lifting devices.

* Employers should ensure scaffold platforms are securely fastened to the lifting device they are attached to.

* Employers should develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in all hazard recognition and abatement.

**PROGRAM OBJECTIVE:**

The goal of the Fatality Assessment and Control Evaluation (FACE) workplace investigation is to prevent work-related deaths or injuries in the future by a study of the working environment, the

worker, the task the worker was performing, the tools the worker was using, and the role of management in controlling how these factors interact.

This report is generated and distributed **solely** for the purpose of providing current, relevant education to employers, their employees and the community on methods to prevent occupational fatalities and injuries.

**INTRODUCTION:**

On September 2, 1998, at approximately 1:30 p.m., a 37-year-old carpenter was killed when the portable wooden scaffold he was on collapsed. The Nebraska Department of Labor was notified of the incident by OSHA on September 2, 1998. The Nebraska FACE Investigator conducted a site visit with OSHA on September 2, 1998. The Nebraska FACE Investigator conducted a site visit on September 3, 1998 with a Spanish Interpreter from the Nebraska Department of Labor to interview Spanish-speaking employees. Interviews were also conducted on September 8 and 9, 1998. Interviews were conducted with the company owner, employees and other workers on site at the time of the incident.

This construction company has been in business for 34 years. The victim had been employed by the company for 10 years. The total number of employees in the company is 10 and 6 were at the incident location. The company does not have a safety manager or a written safety program. This was the first fatality in the history of the company.

**INVESTIGATION:**

On the day of the incident the victim began work at 6:30 a.m. The incident occurred at approximately 1:30 p.m. while the victim and a coworker were working on a portable wooden scaffold. The scaffold was made by the company to use as a platform while installing sheathing and plywood to buildings being constructed. The incident portable scaffold/platform was made out of plywood, 2 x 4s and 2 x 6s. A sketch of the platform is at figure 1. The platform was 14' x 4' and was built around April 1998. The total hours of use for the platform was estimated at 30 hours and it was used approximately 3 hours the day of the incident.

The platform was normally lifted in the middle with the 4 foot forks of the lifting machine supporting the full width (4 feet) of the platform. The area they needed to work in was only 11 feet wide so the platform would not fit in with the forks in the middle (see figure 2). The workers decided they would lift the platform from the end rather than the middle, allowing them to get into the 11 foot wide space. Company personnel told me that this was the first time this platform had been lifted and used lengthwise. The 14 foot long platform was then supported only from one end by the four foot long forks of the lifting machine. The load on the platform consisted of 8 sheets of ½ inch plywood (approximately 60 pounds each) 10-12 sheets of insulation, and 2 workers. The load on the platform was approximately 900 pounds. The platform was lifted into place, with the workers and materials on it. The open side of the platform was against the building. It had been in place approximately 45 minutes when the incident occurred. The wooden channels, into which the forks were inserted, snapped and the platform appeared to roll inward toward the building, throwing the workers to the ground. The platform and the materials on it landed on the victim, causing fatal injuries. The other person on the platform was thrown clear and suffered a broken pelvis. Personnel on site immediately called 911 and the victim was life-flighted to the hospital and the other worker was transported to the hospital by ambulance.

**CAUSE OF DEATH:**

The cause of death, according to the Death Certificate, was blunt trauma to the chest and abdomen.

**RECOMMENDATIONS/DISCUSSION:**

**Recommendation #1: Employers should not use "homemade" scaffolds on lifting devices**.

Discussion: The portable wooden scaffold in this incident was made by personnel in the company. CFR 29 1926.451 (c)(2)(iv) states, "Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use." Had this platform been designed by the manufacturer of the lift being used, it would have had weight limits and instructions for proper use. Recommend any "homemade" portable platforms, used by any company, be dismantled and replaced with authorized platforms.

**Recommendation #2: Employers should ensure scaffold platforms are securely fastened to the lifting device they are attached to.**

Discussion: The portable wooden scaffold in this incident was not securely attached to the lifting device. The platform was supported only by the 4-foot long forks inserted lengthwise into the 14-foot long platform. CFR 29 1926.451(c)(2)(v) states, "Fork-lifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied." Authorized platforms should come with instructions regarding proper fastening to the fork-lift.

**Recommendation #3: Employers should develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in all hazard recognition and abatement.**

Discussion: A comprehensive safety program should have addressed the hazards of using a "homemade" platform. Also personnel should have been aware of the danger of lifting the incident platform lengthwise. CFR 1926.454(a) states in part, "The employer shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards." It should be stressed in safety training that anytime anyone senses something is unsafe, they should discuss it. If is seems unsafe - it probably is.

**REFERENCES:**

Office of the Federal Register, National Archives and Records Administration, Code of Federal Regulations, Labor, CFR 1926.451 and 1926.454, 1998.

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