DATE: November 4, 1994
Nebraska FACE Investigation 94NE012

Construction Worker Dies After 25 Foot Fall From I Beams

SUMMARY:

A 33 year-old male construction worker died after falling 25 feet from steel superstructure. The victim was constructing forms for pouring concrete flooring at the time of the accident. The victim was carrying bolts to attach to eyelets welded on the steel I beams he was walking on. He was "straddle walking" on the inner lips (approximately 3") of two I beams approximately 3 feet apart when he apparently slipped and fell to the concrete floor below. The victim was using no fall protection at the time of the accident.

The Nebraska Department of Labor evaluator concluded that to prevent future similar occurrences, employers should:

- **Provide appropriate fall protection equipment to all workers who may be exposed to a fall hazard and enforce its use.**
- **Consult with safety specialists when unsure how to provide effective intervention measures.**
- **Thoroughly address worker safety in the planning phase of construction projects.**
- **Develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in all hazard recognition and the use of fall protection devices.**

PROGRAM OBJECTIVE:

The goal of the 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 the community on methods to prevent severe occupational injuries.

INTRODUCTION:

On April 27, 1994, a 33 year-old construction worker died as a result of injuries sustained from a 25 foot fall from steel superstructure to the concrete floor below. The Nebraska Department of Labor was notified on April 28, 1994, by the contractor who employed the victim. The Nebraska FACE evaluator accompanied OSHA investigators to the accident site on April 28 and 29, 1994 and interviewed the employer. Other information was obtained from the OSHA investigation.

The employer is a general contractor who has been in business for 55 years. The contractor employs 120 and had been at this work site for three and one half months at the time of the incident. This was the first fatality in the history of the company. The company discussed work site safety during the planning and design phases of the project, but did not adequately address fall protection. The company had a written safety program. The victim had worked for the company for five and one half weeks and received general training and attended "tool box" meetings. The company had a designated safety officer who was not present at the site at the time of the accident.

INVESTIGATION:

The contractor, one of many on a large plant construction project, had been hired to form and pour concrete flooring at elevation. The activity the victim was involved in at the time of the accident was called "support forming for elevated pour operations". This operation involved welding, bolting, hanging supports, installing wood joists, wood stringers and a plywood deck. The victim had been working with a co-worker the morning of the accident constructing support forms for concrete pouring. At the time of the accident the victim was carrying bolts to attach to eyelets welded to I beams he was walking on. He was "straddle walking" on the inner lips (approximately 3") of two I beams which were three feet apart when he apparently slipped and fell 25 feet. Witnesses said on the way down, the victim struck a tank structure on his side, bounced and landed on the concrete at ground level. The victim was wearing a safety belt and lanyard at the time of the incident but was not tied off to any attach point. It was accepted procedure on this project for workers to walk the I beams without any fall protection. However, they were instructed to tie off when performing work such as welding and bolting. Two employees on the ground level rushed over to aid the victim. A rescue flight helicopter arrived shortly thereafter and the victim was transported to the hospital where he was pronounced dead on arrival.

CAUSE OF DEATH:

The cause of death was massive internal injuries.

RECOMMENDATIONS/DISCUSSION:

Recommendation #1:Employers should provide appropriate fall protection equipment to all workers who may be exposed to a fall hazard and enforce its use.

Discussion: When working from elevations, employers should provide personal protective equipment (i.e. safety belts, lifelines and lanyards, and nets) for employees exposed to fall hazards. Employers should provide and enforce the use of personal protective equipment in accordance with 29 CFR 1926.95, 29 CFR 1926.104 and 29 CFR 1926.105.

Recommendation #2:Employers should consult with safety specialists (i.e. fall protection specialists) when uncertain how to best provide effective fall intervention measures.

Discussion: The employer thought it was infeasible, in this case, to tie-off while traversing from one point to another at elevation. A safety specialist could have provided him with feasible methods for fall protection for the particular task being performed, such as setting up a catenary line or using safety nets.

Recommendation #3: Employers should thoroughly address worker safety in the planning phase of construction projects.

Discussion: During the planning phase of this project the fall hazard should have been identified and steps taken to mitigate it. The planning and incorporation of safety measures prior to any work being performed will identify potential hazards so preventive measures can be implemented.

Recommendation #4: Develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in fall hazard recognition and the use of fall protection devices.

Discussion: A comprehensive safety program should have addressed the hazards involved with working at 25 feet with no fall protection. An effective safety program should instill an attitude in both employers and employees that the safety of workers will never be compromised for expediency.

REFERENCES:

1. Office of the Federal Register, Code of Federal Regulations, Labor, 29 CFR, part 1926.95, pp. 391. July 1, 1993
2. Office of the Federal Register, Code of Federal Regulations, Labor, 29 CFR, part 1926.104, pp. 408-409. July 1, 1993
3. Office of the Federal Register, Code of Federal Regulations, Labor, 29 CFR, part 1926.105, pp. 409. July 1, 1993

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