

MARYLAND DIVISION OF LABOR AND INDUSTRY

MARYLAND FACE PROGRAM

CASE: 95MD05001

DATE: 8/1/95

TO: Project Officer, State FACE Project, Division of Safety
Research, NIOSH, CDC

FROM: Maryland FACE Program, Division Labor & Industry

SUBJECT: Steel Erector Falls 55 Feet from I-Beam

SUMMARY

A 26 year old male steel erector died from multiple injuries after falling 55 feet from a steel beam to a concrete floor. The victim, while standing on a 30 ton over head traveling crane, was doing touch-up painting to a beam near the ceiling. The victim leaned across a center beam to speak to a co-worker and allowed his hand to come into contact with one phase of a 480 volt bus bar. A co-worker heard something drop and observed the victim falling from the beam. The co-worker went to the guard shack to summon help. After summoning emergency equipment, the security guard responded to the area of the first floor where he observed the victim lying face down. The victim was transported by ambulance to a local hospital where he was pronounced dead by the attending doctor.

The MARYLAND FACE investigator during the course of the investigation concludes that, to prevent similar occurrences:

- *employers should ensure that appropriate fall protection equipment is available and correctly used when working from elevations where there is a danger of falling.
- *employers should provide training and implement comprehensive safe work procedures that specifically address jobsite hazards.
- *employers should routinely conduct scheduled and unscheduled worksite safety inspections.

INTRODUCTION

On July 12, 1995, a 26 year old steel erector (the victim) died of injuries sustained in a fall from a steel beam to a poured concrete floor 55 feet below. Maryland Occupational Safety and Health (MOSH) made notification of the incident to the Maryland FACE Program.

Original and supplemental police reports were reviewed as well as the crime scene photographs of the incident. The assigned police detective, the detective sergeant, and the MD MOSH inspector were interviewed. The crime scene photos along with pictures taken by the MOSH inspector were reviewed by police, MOSH and MD FACE investigator. Additional information was obtained from the MOSH Flash, the MOSH Catastrophe Report on the preliminary fatality, the Preliminary Accident Report from the Division of Labor and Industry and the Workman's Compensation Report.

Contact was established with the General Contractor's Safety Superintendent and an on-site interview was requested. On July 31, 1995 the MD FACE field investigator met with the General Contractor's Project Construction Manager and the Safety Superintendent at the construction site. After an office conference in which the Maryland State FACE Program was explained, the Project Manager and the Safety Superintendent led the investigator on a tour of the incident site.

On August 1, 1995 contact was made with the Safety Inspector of the employer, a sub-contracting steel erecting company. This company had been in business for 22 years and employed 55 people. At the time of the incident six other people were working with the victim on the second shift. The company and the general contractor had written company safety rules and full time safety officers. The victim had been employed with the employer for four months at the time of the incident. The employer stated the victim was an experienced steel worker and always used his protective equipment.

INVESTIGATION

The investigation revealed that the victim had been at this job site for four months. The employer was a sub-contractor responsible for erecting steel girders and beams. The steel erecting work had been completed and the employees were in a finishing up stage. The victim had been tasked to paint bare spots on the beams.

The victim had signed in at the security office at 6:30 pm., and along with a co-worker went to the top level to begin work. The victim was observed at approximately 9:30 pm by a security officer. The security officer reported observing the victim standing on the east crane painting a beam. He also reported that the victim was not wearing a hard hat, gloves or his safety harness at the time of the incident. The victim advised the security officer that he was going to paint until one a.m.

The co-worker reported to investigators that he approached the area below the victim and asked where he could obtain some supplies. The co-worker observed the victim step from atop the crane and lean over the top of a steel beam. Reports indicate and an on-site survey confirmed the beam had four (4) insulated electrical 480 Volt Bus-Bars running parallel with the beams. The bus-bars supply energy to the 15 ton overhead crane and are located 8-10 inches below the top of the supporting beam.

At that time the victim allowed his hand to come into contact with one phase of the Bus-bar. At this time the victim fell from the top of the beam, dropped approximately 10 feet where his head came into contact with the raised edge of the floor. The victim then fell through and down from the third floor to a poured concrete floor below. The co-worker ran from the third floor to the outside guard shack for help. After security had notified the police and rescue units he responded to the fall location. During the interview the security guard reports that he had spoken to the victim during his rounds earlier in the evening and at that time he was not wearing his hard hat, gloves or his fall protection equipment. The victim stated that he would be working until early in the morning. The security guard also reports that approximately 20 minutes later the co-worker ran up to the shack and told him of the incident and to call for help. The guard added that when he went to the area where the victim had fallen, he found him lying face down. Rescue personnel transported the victim to a local hospital where he was pronounced dead approximately 30 minutes after the accident.

As a result of the investigation, it was concluded that the victim, who was not wearing fall protection equipment, had left his work platform to lay across a steel beam and for unknown reasons came into contact with one phase of a 480 volt bus-bar electrical system. The ensuing shock caused the victim to fall from the beam, strike his head on a ledge and continue his fall for a total of 55 feet. The victims personnel protection equipment including hard-hat, gloves and safety belt with lanyard were found laying on the floor approximately 30 feet from the opening into which he had fallen.

CAUSE OF DEATH

The Assistant Medical Examiner lists the cause of death as multiple injuries resulting from a fall.

RECOMMENDATIONS AND DISCUSSION

RECOMMENDATION #1; Employers should ensure that appropriate fall protection equipment is available and correctly used when working from elevations where there is a danger of falling.

Discussion--The victim had been issued appropriate fall protection equipment, harness and lanyard; however, the victim was observed leaving his work station and laying across a steel roofing beam without securing himself with the harness and lanyard. Even after receiving the electrical shock the victim could have fallen six feet to safety not fifty five feet to his death.

RECOMMENDATION #2; Employers should provide training and implement comprehensive safe work procedures that specifically address jobsite hazards.

Discussion--The victim who was an experienced steel worker and familiar with the written safety policy was known to have worn his fall protection "always". However neither the victim nor his six co-workers were warned about the bus bars or instructed in safety related work practices when working around the bus bars.

RECOMMENDATION #3; Employers should routinely conduct scheduled and unscheduled worksite safety inspections.

Discussion--In this incident the victim and his six co-workers were working the evening shift without supervision. The company is responsible to its employees to ensure that its work safety procedures and policies are being followed. A supervisor during the course of his duties could have observed the victim working in an unsafe manner and corrected the lapse of safety.

Roger L. Linger
Field Investigator
Maryland FACE Program
Division of Labor and Industry

Letha Ticer
Principal Investigator
Maryland FACE Program
Division of Labor and Industry

Fatality Assessment and Control Evaluation

The Maryland Division of Labor and Industry administers the Fatality Assessment and Control Evaluation (FACE) Program under a cooperative agreement with the National Institute for Occupational Safety and Health, Division of Safety Research (NIOSH/DSR). The Maryland FACE Program performs investigations of selected occupational fatalities, prepares summary reports, and engages in prevention activities. The goal of our program is to prevent fatal work injuries in the future by studying the working environment, the worker, the task being performed, the tools employed, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact. NIOSH/DSR developed the FACE research protocol in the early 1980s and continues to perform FACE investigations. To increase the research and prevention activities of NIOSH/DSR, states across the nation have been invited to participate in the State FACE Project. Maryland and the fourteen states listed below currently participate in the State Based FACE Project: Alaska, California, Colorado, Georgia, Iowa, Indiana, Kentucky, Massachusetts, Minnesota, Missouri, Nebraska, New Jersey, Wisconsin, and Wyoming.

Additional information regarding this report or the Maryland Face Program is available from:

The Maryland FACE Program
Division of Labor and Industry
501 St. Paul Place, 3rd Floor
Baltimore, Maryland 21202-2272
Phone (410) 333-0887
FAX (410) 333-1771