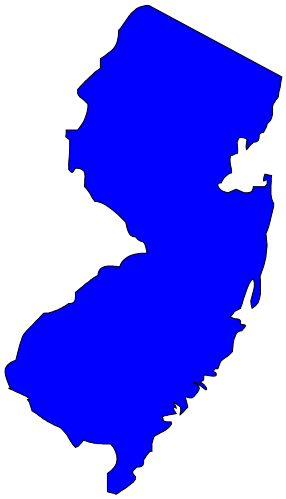
F.A.C.E.
INVESTIGATION REPORT

Fatality Assessment and Control Evaluation Project

FACE #95-NJ-017-01
Electrician Killed When Caught Between a Personnel Lift And An Overhead Bay Door



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FROM: Fatal Accident Circumstances and Epidemiology (FACE) Project
New Jersey Department of Health (NJDOH)

SUBJECT: Face Investigation #95-NJ-017-01
Electrician Killed When Caught Between a Personnel Lift
And An Overhead Bay Door

DATE: Released: September 27, 1995
Appended: November 17, 1995

SUMMARY

On February 6, 1995, a 40-year-old electrician was killed while he was working in a personnel lift to examine a damaged overhead bay door at a loading dock. The victim was radioing instructions to a security guard who was raising and lowering the door on command. Shortly after following the victim's last instructions, the security guard went to check on the victim and found him with his head caught between the personnel lift and the bay door. NJDOH FACE investigators concluded that, in order to prevent similar incidents in the future, employers should follow these safety guidelines:

o Employers should develop, implement, and enforce a lock-out, tag-out procedure for working on machines and other power-operated equipment.

o Overhead door operators should have a clear view of the doors when they are opened or closed.

o Overhead door controls should be logically placed and clearly marked, and an emergency door stop button should be provided..

o Employers should be aware of their health and safety responsibilities for leased or temporary employees.

INTRODUCTION

On February 16, 1995, NJDOH FACE personnel were informed by the county medical examiner of a worker who died of injuries suffered in a work-related incident. After determining that this incident fit the FACE criteria, FACE investigators contacted the contracting employer/incident site owner and conducted a site visit on April 4, 1995. The victim's actual employer, an employee leasing agency, was interviewed by telephone on April 6, 1995. Additional information was obtained from the contracting employer's incident reports, police and medical examiner's reports, and the OSHA investigation file.

The contracting employer and site owner was the printing and mailing subsidiary of a large financial corporation. The printing company originally hired the victim as an electrician, a job he held until September 1994. At that time, the victim and a group of other workers were terminated from the printing company and immediately rehired by the employee leasing agency. The leasing agency then sent the workers back to the printing company. This was done to reduce the printing company's costs, with all employee salary and benefits now paid by the leasing agency. The victim returned to his old duties at the printing company, where he worked under the direction of a printing company supervisor. At the time of the incident, the printing company had about 728 employees, 291 of which were agency, contracted, or temporary employees.

The leasing agency did not provide any employee job or safety training. The printing company provided some job and informal safety "awareness" training. However, they did not have any formal safety programs.

The victim was a 40-year-old male electrician who had worked at the printing plant for about two years. He had about five years of previous experience as a plant electrician and five years of electrical technician and assembly experience.

INVESTIGATION

The incident occurred at the printing and mailing plant located in an industrial park. The plant was a large single-story building holding the production, warehouse, and office areas. The building also had an enclosed four-bay loading dock accessed through two large overhead doors. The overhead doors (each serving two loading bays) measured approximately 35 feet wide by 25 feet high and were controlled by switches located in a small security booth beside the loading docks. Each door weighed about 1,000 pounds and was counterweighted with a spring

mechanism. Due to problems with trucks striking the doors as they closed, each door was equipped with an electric eye which automatically reversed the door and opened it when the beam was crossed. There was a great deal of traffic in the loading dock, with more than a hundred trucks a day being loaded or unloaded.

The incident occurred on a Monday, a cold winter day. At about 9:00 a.m., the right overhead bay door was hit by a truck as it was closing, bowing the bottom door panel inward. Although the damaged door could be raised, it would cycle back up when they tried to close it. Plant security notified the plant's lead electrician who told security to contact the overhead door company to repair the door. The lead electrician also instructed the plant electrician (the victim) to examine the door. At 9:30, the victim used an electrically powered, articulated boom lift to raise himself to the door. Before doing this, he instructed the security guard to open and close the door when told to do so over a portable radio. This was necessary because the guard's view of the door and victim was blocked by trucks backing into the loading dock near the security booth.

There were no witnesses to the incident. At about 10:50 a.m., the guard heard the victim's last instructions to g "down and stop," which he followed. A few minutes later, the guard radioed to the victim that a driver wanted to pull a truck out of the bay. When he didn't get a reply, the guard and truck driver went to the bay to check on the victim. They found him in the lift, pinned against the back of the lift by the top of the overhead door pressing against his neck (see figure 1). The guard radioed for help and was joined by other plant personnel. The workers thought to move the lift using the ground controls but feared that the sudden movement might break the victim's neck. A driver pulled his truck under the open door, and a group of men climbed on top of the truck and manually pulled the door down. They then lowered the lift and the victim to the ground. A plant employee (who was an EMT and CPR instructor) perfomed CPR until the police and EMS arrived. The EMS treated the victim for 45 minutes before transporting him the regional trauma center. He was pronounced dead at the trauma center at 12:02 p.m.

It is not known exactly how the victim became pinned against the door. A possible explanation is that as the door was being lowered, the damaged (bowed out) panel broke the beam of the electric eye. This caused the door to reverse direction, pinning the victim who was unaware that the door was opening. A printing company representative also speculated that the victim may have inadvertently moved the lift against the raised door.

CAUSE OF DEATH

The county medical examiner attributed the cause of death to asphyxiation due to mechanical compression of the neck.

RECOMMENDATIONS AND DISCUSSION

Recommendation #1: Employers should develop, implement, and enforce a lock-out, tag-out procedure for working on machines and other power-operated equipment.

Discussion: In this incident, the victim was killed after he apparently placed himself in close proximity to the moving overhead door. To prevent injuries while servicing machines, FACE recommends that employers develop, implement, and enforce a lock-out, tag-out program. This program requires that machines and powered equipment being serviced must be locked out if there is a risk of coming in contact with moving machine parts. A lock-out, tag-out program may be required under the OSHA standard 29 CFR 1910.147.

Recommendation #2: Overhead door operators should have a clear view of the doors when they are opened or closed.

Discussion: The security guard who operated the door had a closed circuit TV showing an exterior view of the overhead doors. However, his view of the interior was obstructed by trucks backed against the loading docks. To increase visibility, FACE recommends that the booth should be equipped with a closed-circuit television showing the interior of the loading dock and doors.

Recommendation #3: Overhead door controls should be logically placed and clearly marked, and an emergency door stop button should be provided..

Discussion: The police report noted that the overhead door controls in the guard booth were reversed (i.e., the right control operated the left door). FACE recommends that operating controls should be logically placed (the right control operating the right door) and clearly marked. An emergency door stop button located inside the bay is also recommended.

Recommendation #4: Employers should be aware of their health and safety responsibilities for leased or temporary employees.

Discussion: The responsibility for this incident (and the OSHA citations) fell on the printing company who contracted the agency employees. As the trend of hiring leased and temporary employees continues, employers must be aware of their responsibilities for health and safety. Employers who hire leased or temporary employees are responsible for providing safety training for hazards that are specific to their worksite. The employer may also be entirely responsible for the health and safety of the agency employee if the employee is under the direction of company supervisors. If employers are unsure of their responsibilities, they should contact their local OSHA area office for information.

REFERENCES

Code of Federal Regulations, 29 CFR 1910. US Government Printing Office, Office of the Federal Register, Washington, D.C.

"Control of Hazardous Energy (Lockout/Tagout)" US Department of Labor, OSHA Publication #3120, OSHA Publications Office, 200 Constitution Ave. N.W., Washington, D.C. 20210.

ADDENDUM TO FACE INVESTIGATION #95-NJ-017-01

On October 12, 1995, NJDOH FACE investigators received a letter from the printing and mailing company who was the contracting employer and site owner in this incident. This letter was written to clarify and correct several statements made in the FACE report. In the interest of accuracy and fairness, these comments are summarized below.

It should be noted that the FACE program did not re-open this investigation and is amending the FACE report solely on the information provided by the printing company.

Introduction, second paragraph: The victim was never directly employed by the printing and mailing company. Prior to September, 1994, the victim and a group of other workers were employed by XX, a temporary employment agency. The printing company management, in the interest of reducing turnover and securing a steady work force, searched for another vendor who would pay this group competitive wages and benefits. Hence the transfer from XX to the employee leasing agency who employed the victim at the time of the incident.

Introduction, third paragraph: The printing company stated that the final two sentences in the paragraph were incorrect and should be stricken. The company suggested the following language to describe their safety program:

> "The leasing agency did not provide and employee job or safety training. The printing company had several formal safety programs in place. A Lockout/Tagout program had been drafted and authorized employees had access to locks and tags."

Investigation, second paragraph: The description of the damaged bay door should be clarified to reflect that the incident involved the door facing right from the outside, which is the left door from the inside.

Investigation, second paragraph: The lead electrician was not an employee of the printing company, but was also a leased employee.

Recommendation #4, discussion: The company noted that OSHA did not make any conclusions about the responsibility for this incident and only made observations and issued citations. The printing company was not the only company cited in this incident, as OSHA also cited the employee leasing agency. The company suggested that the discussion section should indicate that the host employer as the controlling employer has the responsibilities for site specific safety even when it utilizes leased or temporary employees.

11/17/95

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