Massachusetts Warehouseman Dies in Fall from Mezzanine

MASSACHUSETTS FACE 94-MA-070-01

SUMMARY

A 27-year old male warehouseman was fatally injured on November 16, 1994 after falling approximately 14½ feet from a second level mezzanine. The victim was helping a co-worker unload bales of cardboard from a forklift when he fell from the open edge of the mezzanine floor. Emergency medical assistance transported the victim to a regional hospital, where he died two days later as a result of the injuries. To prevent future similar occurrences, the FACE Program concluded that employers should:

- **ensure that fall protection by guarding or use of personal protective equipment is provided and used by all employees whenever any work is performed at an elevation over 4 feet**
- **analyze the materials handling process to identify safety hazards and re-design the process to eliminate as many hazards as possible**
- **design, develop, and implement a comprehensive safety program that includes involving and training employees in recognizing hazards and utilizing controls**

INTRODUCTION

On November 19, 1995, the MA FACE Program was informed by a Massachusetts medical examiner through the 24 hour hotline that a 27-year old male warehouseman had died the previous day from injuries received in a fall on November 16, 1994. An investigation was immediately initiated. The FACE investigator traveled to the incident site on December 5, 1994 and interviewed an employer representative and co-workers of the victim. Photographs, witness interviews, newspaper clippings, and a copy of the death certificate were obtained to assist in the investigation.

The employer was a wholesale wallcovering distributor that had been in business for 40 years. The company employed a total of 390 persons, with 275 employees working at the incident location. The company did not have a designated safety officer or written safety rules, and no safety procedures were in place for the tasks performed by the victim at the time of the incident.

The victim was one of six company warehousemen and was employed by the company less than two months at the time of his death.

INVESTIGATION

On the morning of November 16, 1995, a forklift operator and a warehouseman were working at a Massachusetts wholesale wallcovering warehouse receiving and storing bundles of collapsible shipping boxes. The task required the forklift operator to stack pallets containing bales of boxes at the edge of the mezzanine. The warehouseman, working on the mezzanine, then transferred the bales to storage on the mezzanine using a pallet jack.

The mezzanine was approximately 14½ feet above the first floor. Each bale of cardboard boxes was approximately 3 feet high by 3 feet wide. The weight of the bales was unknown. The mezzanine receiving area had an open-edged floor with two sliding mesh gates from ceiling to floor. The two gates together were approximately 7 feet tall and 9 feet wide. The gates were intended to safeguard the open area when materials were not being received. It was reported that one side of the gates was usually left open, creating an opening approximately 5 feet wide.

Initially working by himself on the mezzanine level, the warehouseman moved three pallets containing one bale of cardboard each. When the fourth pallet was lifted by the forklift, it held two bales of cardboard, as received from the distributor. The warehouseman placed an empty pallet on the floor for the upper bale. Unable to transfer the upper bale to the pallet by moving it side to side, he sought the assistance of a second warehouseman (the victim), who was working at a nearby workstation. The victim had assisted at this task in the past. Together they were able to slide the upper bale off the lower bale and onto the empty pallet. They then stored the two bales with the pallet jack. The men successfully handled an identical pallet in the same way.

When a third pallet with two bales arrived, the men again placed an empty pallet on the floor and went to opposite sides of the load. The first warehouseman reported that as they began to work, his side of the upper bale initially seemed to slide more easily than the previous loads. However, when the bale was approximately three-quarters of the way onto the floor pallet, it became caught up on a pallet cross member. While attempting to free the bale, he suddenly sensed that he was lifting and pushing by himself. He then heard a noise from below followed by a yell to “Call 911!” The co-worker looked down from the mezzanine to see the victim on the floor below.

There were no tripping hazards in the area. The co-worker could not see the victim from his side of the load, so there were no witnesses to exactly what caused the fall.

The victim was revived, but quickly became pulseless and cyanotic. He was tended by other workers until emergency medical services arrived to transport him to the hospital. He died from his injuries two days later.

CAUSE OF DEATH

The medical examiner listed the cause of death as blunt head trauma.

RECOMMENDATIONS

Recommendation #1: Employers should ensure that fall protection by guarding or use of personal protective equipment is provided and used by all employees whenever any work is performed at an elevation over 4 feet.

Since this incident the employer has installed a lifeline on the mezzanine and implemented the use of lanyards and full-body harnesses by employees while working at the mezzanine opening.

Recommendation #2: Employers should analyze the materials handling process for safety hazards, and redesign the process to eliminate as many hazards as possible.

Discussion: A thorough analysis of the materials handling process in this warehouse would have indicated a high potential fall hazard at the opening of the mezzanine. Installing the sliding gates indicates awareness and control of the fall hazard for employees performing other regular tasks on the mezzanine. Many times infrequent or special operations may be overlooked when performing a hazard analysis. Therefore it is important to examine some jobs by process rather than location, such as materials delivery, handling and storage.

In many situations, a change in the materials handling process may eliminate some of the hazards. In this case, the pallets of cardboard were sometimes received in stacks which were two bales high. This created the problem of removing one of the bales at the edge of the mezzanine. This activity was more appropriately done on ground level. In fact, since this incident, the employer has changed this process and will not accept stacked bales from the distributor.

Recommendation #3: Employers should design, develop, and implement a comprehensive safety program that includes involving and training employees in recognizing hazards and utilizing controls.

Discussion: Worksite safety depends on the anticipation and control of hazards at all times. Continuing success of a safety program depends on the involvement of employees and the complete support of management. It is important that employees receive training in recognizing safety hazards and taking appropriate steps to deal with them. When not themselves equipped to provide safety training, employers should select a qualified individual to develop training for both workers and management. In this case, employee safety training would have made the victim and his co-workers more aware of the severity of the fall hazard while working on the mezzanine. This knowledge may have prompted them to seek safer work practices or protective equipment, and may have prevented the incident from occurring.

REFERENCES

U. S. Department of Labor, OSHA, Code of Federal Regulations, Labor 29 Part 1910 Subpart D – Walking-Working Surfaces and Subpart I – Personal Protective Equipment

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