

Night Crew Associate Dies after Fall at Retail Building Supply Outlet in Massachusetts

Investigation: # 95-MA-013-01

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SUMMARY

On May 23, 1995, a 52 year old male night crew associate died of complications received in a twelve foot fall on May 3, 1995. The victim was standing on an elevated wooden pallet at the time of the incident and moving cabinet stock onto a storage rack. The wooden pallet broke and the safety belt the victim was wearing failed allowing him to fall approximately twelve feet to the concrete floor below. Complaining of numbness in the legs and lower back pain, the victim was transported to a local hospital by emergency medical services. He was held at the hospital where he died of complications twenty days following the incident.

The MA FACE Program concluded that to prevent similar future occurrences, employers should:

- C implement a personal protective equipment inspection program that ensures the removal of defective equipment from service***
- C ensure that all employees who are subjected to fall hazards in the course of their employment are suitably trained in fall hazard recognition and the use of personal protective equipment***
- C ensure that surfaces from which employees might work be structurally adequate and suitable for the task***

INTRODUCTION

On May 24, 1995, the MA FACE Program was notified by a Massachusetts Medical Examiner's Office of the death of a 52 year old male who died the previous day from injuries sustained in a fall at work on May 3, 1995. An investigation was immediately initiated.

On June 1, 1995, the MA FACE Program Field Investigator traveled to the incident site and conducted interviews with the corporate safety manager, human resources manager and personnel administrator. The police report, death certificate, internal corporate incident memorandum, OSHA data and multiple photographs were obtained during the course of the investigation.

The employer was part of a national chain and was self-described as being in the retail trade of "do-it-yourself" building materials, home products and gardening supplies. The company was incorporated in 1987. The incident location opened in the Spring of 1991 and employed 204 persons in multiple retail type occupations. Ten of those employed were night crew associates who performed duties similar to those of the victim. The corporation designated each store manager as the responsible person for the maintenance and enforcement of its written safety policies and procedures.

The victim was a 52 year old male night crew associate, primarily responsible for stocking and re-stocking shelves, and was employed by the company for three years and two months at the time of the incident. The victim's background included training in personal protective equipment use, hazard communication, machinery and equipment, hazard identification, work practices and hazardous materials.

INVESTIGATION

During the late evening hours of May 3, 1995, a team of night crew associates (stock persons) were at work replenishing store shelves at a building materials, garden supplies and home products facility. The shelves were routinely restocked at night to ensure adequate consumer product availability at the outset of each business day.

At approximately 11:30 p.m., the victim was restocking cabinetry on the top shelf at a designated store location. To do so, the victim utilized a powered combination man/materials lift to elevate himself and a pallet load of cabinetry to the top shelf of a storage rack approximately twelve feet from floor level. Prior to this, the victim had donned a safety belt and lanyard and fastened the lanyard to a "D" ring on the belt and onto a firmly anchored connection point on the lift.

Once elevated, the victim began to shift the cabinetry cartons from the pallet to the storage shelf. The need soon arose for the victim to stand on the pallet with the stock to complete the task. The pallet on which he stood broke apart causing him to fall through it. The safety belt "D" ring to which his lanyard was attached tore away from the belt allowing the victim to fall to the concrete floor below. Hearing the commotion, co-workers in nearby aisles responded to the incident scene while emergency medical services were summoned.

Police and emergency medical services soon arrived and transported the victim, who was complaining primarily of numbness in his legs and lower back pain, to a local hospital where he was treated for bilateral tibial and fibular fractures. He was subsequently admitted to the hospital. Less than three weeks later, on May 23, 1995, the victim died of complications associated with his injuries.

The incident investigation revealed that the safety belt in use at the time of the incident was defective. The threaded stitching, designed to hold the "D" ring onto which he was tethered in place, failed when subjected to use. The employer indicated that it had done a safety audit of personal protective equipment, including

belts and lanyards, on April 20, 1995. The employer also recalled that this belt was not inspected on this date, and if it had, would have immediately been removed from service.

CAUSE OF DEATH

The medical examiner listed the immediate cause of death as acute myocardial infarction followed by hypertensive heart disease; bilateral tibial and fibular fractures; obesity; sepsis and disseminated intravascular coagulation.

RECOMMENDATIONS

Recommendation #1: Employers should implement a personal protective equipment inspection program that ensures the removal of defective equipment from service

Discussion: US Department of Labor - OSHA Standard 29 CFR 1910.132(e) mandates that damaged or defective equipment be immediately removed from service. The ANSI Standard for Construction which publishes specifications for fall protection equipment recommends inspecting the system at least twice annually by a competent person according to manufacturer's recommendation and keeping written records of the inspection. They also recommend that "each unit shall be visually inspected for defects prior to each use and particular attention should be directed to the following types of damage: (a) cuts, (b) cracks, (c) tears or abrasions, (d) undue stretching, (e) overall deterioration, (f) mildew, (g) operational defects, (h) heat, (l) acid or other corrosion, (j) defective or distorted snap-hooks or faulty springs."

The most efficient way to ensure that defective equipment is identified and removed from service is to implement an inspection or monitoring system. This system should ensure that every piece of personal protective equipment is regularly checked out for wear or damage that could compromise its reliability when subjected to use. In this case, the company conceded that equipment identifiers would best ensure that each piece of equipment is inspected at regular intervals.

Such a system might also include keeping equipment in sets so that workers must receive a full set of equipment, signing out equipment when needed and returning it to a central location after each shift, keeping an written inspection history of each set of equipment, tags for marking equipment that has been damaged in service for repair or removal, training a competent person who would be responsible for repair or removal decisions, and keeping an inventory of replaceable parts so that repairs to sets may be

easily accomplished.

Recommendation #2: Employers should ensure that all employees who are subjected to fall hazards in the course of their employment are suitably trained in fall hazard recognition and the use of personal protective equipment

Discussion: The investigation revealed that the employer was not in compliance with US Department of Labor - OSHA Standard 29 CFR 1910.132(f.) (4) mandating that all employees required to wear a safety belt and lanyard be properly trained in the use and care of the equipment and that certification of this training be kept on record.

Such training is an integral part of any site safety and health program, and should include, but not be limited to:

- C *when personal protective equipment is necessary*
- C *what personal protective equipment is necessary*
- C *how to properly don, adjust and wear the equipment*
- C *the limitations of the equipment*
- C *the proper care, maintenance, useful life and disposal of the equipment*

Recommendation #3: Employers should ensure that surfaces from which employees might work be structurally adequate and suitable for the task

Discussion: *In this incident, the pallet which failed was never built to be a working surface. The investigation revealed that the pallet which failed was of poor quality and contained several knots and split wooden members. The bottom pieces were darkened and discolored suggesting exposure to water or other wood compromising agents. Employers should ensure that surfaces on which employees may work are dry, uncluttered and free of recognized hazards. In this case, the employer also notified the cabinetry supplier that one of their shipping pallets failed and was involved in a workplace fatality.*

Employees should be advised not to use pallets as working surfaces. Even a well-made pallet may be insufficient for the task. The spaces between the wood may cause tripping or awkward postures. Employers, together with their employees, should analyze the materials handling process for all possible hazards. If an analysis of the materials handling process indicates that working from a pallet may become necessary to perform a task, an alternate work surface should be provided, or an alternate procedure should be found.

REFERENCES

**American National Standard for Construction and Demolition Operations -
Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for
Construction and Demolition Use, ANSI A10.14-1991.**

**Code of Federal Regulations, Labor 29 Part 1910.132(e) and 29 Part 1910.132(f)(4)
and Labor 29 Part 1910.178(m)(12), Government Printing Office**