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PUBLIC HEALTH SERVICE/CDC/NIOSH/DSR
FACE 97-07

TO: **Director, National Institute for Occupational Safety and Health**

FROM: **Division of Safety Research, NIOSH**

SUBJECT: **Order Picker Dies After Falling From a Lift Truck-Suspended Pallet--North Carolina**

SUMMARY

On April 30, 1997, a 70-year-old male order picker (the victim) died after falling 8 feet from a lift truck-suspended pallet and landing on a concrete floor. The victim was alone in the warehouse loading 35-pound boxes of clothes hangers on the suspended pallet. When a co-worker reentered the warehouse approximately ½ hour later, he found the victim lying on his back on the floor in an unresponsive state with no vital signs. The Emergency Medical Service (EMS) was summoned from the company office. When EMS personnel arrived, they summoned the medical examiner, who pronounced the victim dead at the scene.

NIOSH investigators concluded that, to prevent similar incidents, employers should:

- *ensure that workers continually adhere to the safe work procedures that have been established by the employer*
- *provide workers with a firmly secured work surface*
- *instruct workers in proper workplace set-up*
- *encourage all employees to actively participate in work-place safety*
- *routinely conduct scheduled and unscheduled worksite safety inspections.*

INTRODUCTION

On April 30, 1997, a 70-year-old male order picker (the victim) died after falling 8 feet from a lift truck-suspended pallet and landing on a concrete floor. On May 2, 1997, officials from the North Carolina Occupational Safety and Health Administration (NCOSHA) notified the Division of Safety Research of this fatality, and requested technical assistance. On May 21, 1997, a DSR safety specialist conducted an investigation of the incident.

The incident was reviewed with the NCOSHA compliance officer assigned to the case and the company personnel director. Photographs of the site taken immediately after the incident were reviewed, and the site was photographed during the investigation.

The employer in this incident was a wholesale laundry supply and machinery distributor that had been in operation since 1941 and employed 45 workers, including 3 lift truck operators. The employer had no written safety program, although a program was being drafted and was nearly complete. The employer did have safety rules that were verbally conveyed to the employees, which included wearing the safety belt and lanyard anchored to the lift truck mast when working above ground. Training was provided on the job. The victim had worked full-time for the company for 10 years before retiring in 1991. Two years ago, the victim had begun working part-time for the company, from 3 to 5 days a week. This was the first fatality experienced by the company.

INVESTIGATION

A forklift operator and two lift truck operator/order pickers (including the victim) worked in the company warehouse pulling orders and transporting them to the loading dock where the outside trucks were loaded for deliveries. The two picker/operators rotated between picking orders and assisting the outside truck drivers with the loading of the outside trucks. The men used a lift truck to access the three-tiered shelving in the warehouse. The bottom of the highest shelf was 9 feet above the floor. A safety belt and lanyard were anchored to the mast of the lift truck. A full body harness was also available in the warehouse. The men stood on, and loaded, a 4 foot by 5 foot wooden-plank pallet, then transported the pallet to an area where it could be picked up by forklift. The picker/operators staggered their lunch breaks to maintain a flow of materials to the loading docks.

On the day of the incident, one of the picker/operators left the warehouse for his lunch break while the victim continued to pull an order. The victim had positioned the lift truck such that the pallet was parallel and 18 inches away from the face of the shelving, and the top of the pallet was 8 feet above floor level (1 foot below the shelf). The victim was loading boxes (approximately 18 inches square) of clothes hangers weighing approximately 35 pounds onto the pallet. The victim was not wearing the safety belt.

When the co-worker returned from his lunch break approximately 30-45 minutes later, he found the victim lying on the floor on his back with his head facing toward the shelving. The victim was unresponsive and the co-worker could not detect any vital signs. The co-worker went to the company office and told office

personnel to summon the Emergency Medical Service (EMS). When EMS personnel arrived, they immediately summoned the medical examiner, who pronounced the victim dead at the scene.

Although the event was unwitnessed, it is possible the victim lost his balance while lifting the boxes, then pivoting and placing them on the pallet while standing over the 18-inch gap between the shelving and the edge of the pallet and stepping up 1 foot to the shelf. The victim may also have placed his foot between two of the wooden planks on the top surface of the pallet, causing him to lose his balance and fall.

CAUSE OF DEATH

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

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should ensure that workers continually adhere to the safe work procedures that have been established by the employer.

Discussion: Employers should continually stress the importance of adherence to established safe work procedures. In this instance, a safety belt and lanyard were provided, and required when work was performed above ground. During employee interviews with the NCOSHA compliance officer, it was learned that the workers often did not wear the safety belts and lanyards because the length of the lanyard restricted movement if the worker had to step onto the shelf. If this were the case, a retractable lanyard that would give the employee more length could be attached to the anchor point on the mast.

Recommendation #2: Employers should provide workers with a firmly secured work surface.

Discussion: In this incident, a pallet (with open spaces between the boards on the surface) to be used as a work surface was placed unsecured on the forks of the lift. Additionally, 29 CFR 1926.602 (c)(1)(viii)(A) requires that whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks for lifting personnel, a safety platform firmly secured to the lifting carriage and/or forks shall be used as an additional precaution for the protection of the personnel being elevated. Although this regulation pertains to construction activities, all work platforms should be secured to lift truck forks to ensure worker safety.

Recommendation #3: Employers should instruct workers in proper workplace set-up.

Discussion: In this instance, the edge of the pallet was 18 inches from the front face of the shelving and 1 foot below it, causing the victim to step up and over to the shelving while lifting and pivoting with the hanger boxes. Positioning the lift truck as close to the shelf as possible in a manner that would allow for a level work surface would assist employees in maintaining their balance and ensure proper lifting techniques.

Recommendation #4: Employers should encourage all employees to actively participate in workplace safety.

Discussion: Employers should encourage all workers to actively participate in workplace safety and should ensure that all workers understand the role they play in the prevention of occupational injury. Workers and co-workers should look out for their personal safety and the safety of co-workers. When workers observe hazardous conditions or activities, they should, depending on the circumstances, notify management and/or remind co-workers of the proper way to perform their tasks and protect themselves. Employers must instruct workers of their responsibility to participate in making the workplace safer. Increased worker participation will aid in the prevention of occupational injury.

Recommendation #5: Employers should routinely conduct scheduled and unscheduled worksite safety inspections.

Discussion: Employers should be aware of any potential hazards or unsafe work conditions or practices in the workplace and should take an active role to eliminate them. Scheduled and unscheduled safety inspections should be conducted by a competent person[1] to ensure that the workplace is free of hazardous conditions. Even though these inspections do not guarantee the prevention of occupational injury, they may identify hazardous conditions and activities that should be rectified. Further, they demonstrate the employer's commitment to the enforcement of the safety program and to the prevention of occupational injury.

REFERENCES

29 CFR 1926.602 (c)(1)(viii)(A) Code of Federal Regulations,

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[1]Competent person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authority to take prompt corrective measures to correct them.

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Fatality Assessment and Control Evaluation (FACE) Project

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), performs Fatality Assessment and Control Evaluation (FACE) investigations when a participating State reports an occupational fatality and requests technical assistance. The goal of these evaluations is to prevent fatal work injuries in the future by studying the working environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact.

States participating in this study: North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia.

Additional information regarding this report is available from:

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