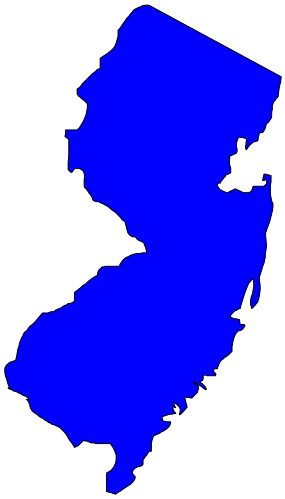
F.A.C.E.
INVESTIGATION REPORT

Fatality Assessment and Control Evaluation Project

FACE #94-NJ-055-01
Warehouse Worker Dies After Falling
12 Feet From A Pallet Raised On A Forklift Truck



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TO: Division of Safety Research
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FROM: Fatality Assessment and Control Evaluation (FACE) Project
New Jersey Department of Health (NJDOH)

SUBJECT: FACE Investigation #94-NJ-055-01
Warehouse Worker Dies After Falling 12 Feet From A Pallet Raised On A Forklift Truck

DATE: September 26, 1994

SUMMARY

On March 16, 1994, a 19 year-old male warehouse order picker was fatally injured after falling from a pallet that was raised on the forks of a forklift truck. The incident occurred when the victim and a co-worker were getting an order of paper products that had been stored on the top tier of a warehouse storage rack. The victim was raised on the forklift and had retrieved a box of paper when he stepped off the edge of the pallet, falling 12 feet to the concrete floor. The victim died on March 17, 1994, four hours after the incident. NJDOH FACE investigators concluded that, in order to prevent similar incidents in the future, these safety guidelines should be followed:

o Employers should ensure that employees are properly trained and supervised before performing a job task.

o Forklifts should be provided with a properly designed platform for raising employees.

o Employers should develop and implement a written certification program for operating powered equipment.

o Employers should conduct a job hazard analysis of all work activities with the participation of the workers.

o Employers and employees should develop and implement a comprehensive safety program with the assistance of a joint labor/management safety committee.

INTRODUCTION

On April 26, 1994, NJDOH FACE investigators were notified by the OSHA area office of a death resulting from a work-related fall. On May 25, 1994, NJDOH FACE investigators conducted a site visit to interview the employer and photograph the incident site. Additional information on the incident was gathered from the OSHA compliance officer, the police and medical examiner's reports, and a written witness statement.

The employer was a distributor of fine paper products (e.g., writing paper) who employed 60 employees in a two shift operation. The company had been in business for 30 years and had been at this location for the past 9 years. The company provided certification training for forklift operators but did not have a formal written safety program. The victim was a 19 year-old male order-picker who had worked for the company for only six weeks. He had been hired together with his friend (also a 19 year-old male) who was working with him at the time of the incident. Neither the victim or his friend had been trained in the use of the forklift trucks.

INVESTIGATION

The company was located in a large, well maintained warehouse which contained the company offices, inventory storage, and shipping docks. Manufacturing was not done on the premises; the company purchased paper products from different manufacturers and stored them at the warehouse until sold. The products were placed on wooden pallets and stored on industrial storage racks that lined the warehouse. To fill (pick) an order, an employee used a forklift truck to remove the product from the higher racks. The company used several types of forklift trucks, including an "order-picker" which raised the employee in a semi-enclosed operator's cab. The forklift involved in this incident was a conventional, propane powered, counterbalanced forklift.

The incident occurred on a late Wednesday evening during the company's second shift. The victim and his friend were scheduled to work from 4:30 p.m. until finished with their work. The evening passed uneventfully as the two picked orders from the inventory. The co-worker stated that sometime around 10 p.m., he and the victim were "riding around" on the forklift. The victim was apparently driving the lift when he ran into a pallet, damaging an order of paper on it. The two workers intended to pull a replacement for the order, which was stored on the top tier of the storage racks near the center of the warehouse. Using the forklift with a wooden pallet on the forks, the victim stood on the pallet while the co-worker raised him to the top tier of the shelf, which was about 12 1/2 feet from the floor. The co-worker then shut off the lift and applied the parking brake. The victim reached to get the order, a partial box of 23 by 35 inch folio paper weighing about 20 pounds. The co-worker stated that the victim may have pulled the paper too hard and missed the pallet as he stepped back. The victim came off the pallet, landing head first on the concrete floor. The pallet stayed in place on the forks.

A worker in the next aisle heard the victim fall and went to give assistance. The victim was unconscious and was having difficulty breathing. The police and EMS arrived and stabilized the victim while a med-evac helicopter was enroute. The victim was transported to the regional trauma center where he was pronounced dead at 3:15 a.m., about four hours after the incident.

CAUSE OF DEATH

The county medical examiner attributed the cause of death to multiple fractures and internal injuries sustained in a fall off a forklift.

RECOMMENDATIONS/DISCUSSIONS

Recommendation #1: Employers should ensure that employees are properly trained and supervised before performing a job task.

Discussion: The victim and his co-worker had not been trained and were not authorized to use the forklift. To prevent future incidents, we recommend that employers fully train their employees in the safe use of powered equipment. FACE recommends that new employees be teamed with experienced employees during their initial training period. Employees must then be closely supervised to ensure that they are following company procedures and safety policies before being allowed to work independently. Employees should never be permitted to operate equipment they have not been fully trained and certified to use.

Recommendation #2: Forklifts should be provided with a properly designed platform for raising employees.

Discussion: The workers in this incident used a wooden pallet on the fork-
lift forks as a platform to raise the victim. FACE recommends that employees should be raised

using a properly designed lifting platform for forklift trucks. These commercially available platforms are designed to be firmly secured to the forks and are provided with guardrails and other safety features. These platforms also allow the employee to use fall protection by tying off a safety belt to the platform. Lift platforms for forklifts are required under the OSHA standard 29 CFR 1910.178(m)(12).

Recommendation #3: Employers should develop and implement a written certification program for operating powered equipment.

Discussion: Shortly before the incident, the employer started an employee certification program for operating forklifts. The training, which was done by a hired consultant, included both classroom and practical training in the operation of forklifts. The FACE Program encourages this training and recommends creating a written program outlining the requirements of the program. This should include general operating instructions, use of fall protection devices, back-up alarms, use of personnel cages, and other operating and safety topics. To prevent non-certified drivers from operating the forklifts, it is suggested that keys to the equipment should only be given to and held by certified operators.

Recommendation #4: Employers should conduct a job hazard analysis of all work activities with the participation of the workers.
Discussion: To prevent incidents such as this, we recommend that employers conduct a job hazard analysis of all work areas and job tasks with the employee(s). A job hazard analysis should begin by reviewing the work activities that the employee is responsible for and the equipment that is needed. Each task is further examined for fall, electrical, chemical, or any other hazard the worker may encounter. The results of the analysis can be used to design or modify a written employee job description. If the employer is unable to do a proper job hazard analysis, then they should hire a safety consultant to complete it.

Recommendation #5: Employers and employees should develop and implement a comprehensive safety program.

Discussion: It is recommended that all employers emphasize worker safety by developing and implementing a comprehensive safety program to reduce or eliminate hazardous situations. This program, which may be developed as part of a joint labor/management safety committee, should include the recognition and avoidance of hazards identified by the job hazard analysis and include appropriate worker safety training. Records should be kept of any training conducted.

REFERENCES

Code of Federal Regulations 29 CFR 1910, 1992 edition. US Government Printing Office, Office of the Federal Register, Washington DC, pg. 500.

ATTACHMENTS

Job Hazard Analysis. OSHA 3071, US Department of Labor, Occupational Safety and Health Administration, Washington DC. 1988.

Information Bulletin: Joint Labor/Management Safety & Health Committees. NJ Department of Health, Public Employees Occupational Safety and Health Program, Trenton NJ.