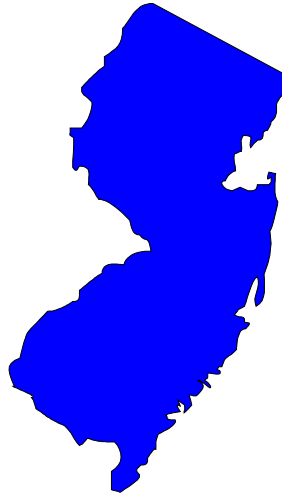


# **F.A.C.E. INVESTIGATION REPORT**

## Fatality Assessment and Control Evaluation Project

FACE #96-NJ-029-01  
Warehouse Worker Dies After Falling  
9 Feet From a Forklift Truck Platform



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FROM: Fatality Assessment and Control Evaluation (FACE) Project  
New Jersey Department of Health and Senior Services (NJDHSS)

SUBJECT: FACE Investigation #96-NJ-029-01  
Warehouse Worker Dies After Falling 9 Feet From a Forklift Truck Platform

DATE: October 31, 1996

### **SUMMARY**

On May 1, 1996, a 36-year-old furniture warehouse worker was killed after falling from a platform mounted on the forks of an order-picker forklift truck. The incident occurred when the victim and a co-worker were moving boxes of furniture onto a newly installed racking system. The workers had loaded the boxes onto the forklift platform and were raising the lift place the boxes on the new racks. The victim was standing on the forklift platform with the boxes and fell off when the lift shook as it was being raised. He fell eight feet eight inches to the floor, striking his head on a section of steel angle iron lying on the cement. NJ FACE investigators concluded that, to prevent similar incidents in the future, these safety guidelines should be followed:

- o Employers should develop and implement a written training and certification program for operating forklift trucks.
- o High-reach forklift operators should be instructed to use fall protection at all times.
- o Employers and employees should conduct a job hazard analysis of all work activities.
- o Employers should develop, implement, and enforce a comprehensive safety program.

## **INTRODUCTION**

On May 2, 1996, NJ FACE investigators were notified by the OSHA area office of a work-related fatal fall that occurred on May 1, 1996. On the same day, an NJ FACE investigator met with the OSHA compliance officers to conduct a concurrent investigation and observe the OSHA witness interviews. An NJDHSS employee accompanied the investigators to serve as an Arabic interpreter. Additional information on the incident was obtained from the police and medical examiner's reports.

The employer was a furniture distribution warehouse that has been in business since 1986 and employed ten permanent and four temporary employees at the time of the incident. The company did not have a written safety program. Employee training in forklift operation was on-the-job taught by the warehouse manager and other experienced employees. It was noted that most of the employees were from the Middle East and spoke and read limited English. One employee stated that he could not read the English warning signs on the machines, but said that he understood the pictures on the signs.

The victim was a 36-year-old warehouse worker who had been employed by the company for less than two months. He was described by a co-worker as strong and smart, and the warehouse manager stated that he was ready to operate the forklift after a week of training.

## **INVESTIGATION**

The incident occurred in a large, well-maintained warehouse located in an urban industrial park. The warehouse contained the business offices, furniture showroom, inventory storage, and shipping docks for the company. Manufacturing was not done on the premises; the company purchased furniture from the manufacturer and stored the merchandise at the warehouse until it was sold.

In October 1995, the company moved into the warehouse from a building across the street. During the previous 15 weeks, the company had been involved in upgrading the storage rack system inside the new warehouse. The new racks were three-tier, steel frame warehouse racks that were being assembled by temporary employees subcontracted to do the work. The racks were built closely together, leaving an aisle about five feet wide between them. Steel angle irons were attached to the

floor along the sides of each aisle to prevent the wheels of the forklifts from striking the bottom of the racks. The racking system was designed so that pallets were not needed. Boxes of furniture were placed on high-lift “order-picker” forklift trucks, which was similar to a conventional forklift except that the operator stands in a 24 by 42-inch semi-enclosed cab located directly behind the forks. The cab was designed to rise with the forks, allowing the operator to move boxes to an eight by four-foot wide platform mounted on the forks. Each forklift was equipped with a safety lanyard secured to the roof of the cab. The forklift operator attached the lanyard to a safety belt, providing fall protection.

The incident occurred at 11:30 a.m. Wednesday, May 1, 1995. The victim was helping a forklift operator in moving boxes of furniture from the old storage system to the newly installed metal racks. The forklift operator stated that they were moving loads of four boxes of furniture (wardrobes) on the forklift platform. With each box measuring 2 by 3½ by 6 feet high, the 8 by 4 foot forklift platform could hold four boxes with about a foot to spare. Through the morning both men rode on the forklift and pushed the boxes onto the racks. They had completed loading one color of wardrobe and were working on the next when the victim took a cigarette break. The forklift operator asked if he was ready, and the victim replied “yes” and went to the truck. The victim stood on the end of the platform, with the boxes between him and the forklift operator (see Figure 1). The operator, who had his back to the victim as he adjusted the forklift to go up, again asked the victim if he was ready before starting the lift. The victim said “yes,” and the co-worker started raising the forks.

No one witnessed the fall. The forklift operator said that the forklift shook as he took his finger off the lift button. The victim, who only had a few inches of platform to stand on, apparently lost his balance and fell, pulling down a wardrobe he was holding. The forklift operator heard the wardrobe fall and looked down to see the victim on the floor with the box on top of him. The operator jumped off the lift and screamed for help before lifting the box off the victim. The victim, who had struck his head on a loose section of angle iron that had not yet been secured to the aisle, was unresponsive and bleeding. The police and EMS arrived and started CPR, but were unable to resuscitate the victim. The victim was pronounced dead at the scene at 11:50 a.m..

## CAUSE OF DEATH

The county medical examiner attributed the cause of death to massive craniocerebral trauma.

## RECOMMENDATIONS/DISCUSSIONS

***Recommendation #1: Employers should develop and implement a written training and certification program for operating forklift trucks.***

Discussion: In this incident, the employees demonstrated their lack of understanding in the safe operation of the machine by riding on the platform of the forklift truck. To prevent similar incidents, FACE recommends that employers implement a comprehensive employee training and certification program for operating forklift trucks. This training should include both classroom and hands-on training on general forklift operations, loading techniques, and safety practices. Employees who complete the training would be certified to use the equipment until due for annual refresher training.

***Recommendation #2: High-reach forklift operators should be instructed to use fall protection at all times.***

Discussion: The high-reach order picker forklift in this incident was equipped with a single safety lanyard attached to the cab of the operator's station. This lanyard was designed to be attached to a safety belt worn by the forklift operator, providing fall protection while the lift was elevated. A second forklift had two lanyards attached to the cab, providing protection for both the operator and helper. FACE recommends that operators and helpers be properly trained in the use of fall protection equipment and be required to use it at all times when using the forklift. Forklifts with only one lanyard should never be used by two employees.

***Recommendation #3: Employers and employees should conduct a job hazard analysis of all work activities.***

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 begins by reviewing the work activities that each employee is responsible for and the equipment that is needed. Each task is further examined for fall, electrical, chemical, or other hazards the worker may encounter. The employees can then be instructed on how to correct or avoid the hazards.

Additional information is included in the attached OSHA publication, *Job Hazard Analysis*. If employers have difficulty in conducting a proper job hazard analysis, then they should consider hiring a safety consultant to complete it.

***Recommendation #4: Employers should develop, implement, and enforce 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.

It is extremely important that employers obtain accurate and up-to-date information about ensuring safe working conditions and adhering to OSHA standards. The following sources of information may be helpful:

U.S. Department of Labor, OSHA

On request, OSHA will provide information on safety standards and requirements for fall protection and the use of industrial trucks. OSHA has four offices in New Jersey which cover the following areas:

- Hunterdon, Middlesex, Somerset, Union, and Warren counties.....(908) 750-4737
- Essex, Hudson, Morris, and Sussex counties.....(201) 263-1003
- Bergen and Passaic counties.....(201) 288-1700
- Atlantic, Burlington, Cape May, Camden, Cumberland,  
Gloucester, Mercer, Monmouth, Ocean, and Salem counties.....(609) 757-5181

NJDOL OSHA Consultative Services

The New Jersey Department of Labor will provide free advice for business owners on improving health and safety in the workplace and complying with OSHA standards. Their telephone number is (609) 292-3922.

### New Jersey State Safety Council

The NJ Safety Council provides a variety of courses on work-related safety. There is a charge for the seminars. Their address and telephone number is: NJ State Safety Council, 6 Commerce Drive, Cranford, NJ 07016. Telephone (908) 272-7712

### **REFERENCES**

*Safety Standard for Low Lift and High Lift Trucks.* ASME B56.1-1993, The American Society of Mechanical Engineers, New York NY.

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

### **ATTACHMENTS**

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

## **DISTRIBUTION LIST**

### **Immediate Distribution**

NIOSH

Employer

Decedent's Family

NJ State Medical Examiner

County Medical Examiner

Local Health Officer

NJDOH Census of Fatal Occupational Injuries (CFOI) Project

### **General Distribution**

USDOL-OSHA Region II Office

USDOL-OSHA New Jersey Area Offices (4)

NJDOL OSHA Consultative Service

NJDOL Public Employees OSHA

NJDOH Public Employees OSHA

NJ State Safety Council

NJ Institute of Technology

NJ Shade Tree Federation

NJ Utilities Association

University of Medicine & Dentistry of NJ

Jersey Central Power & Light

Public Service Electric and Gas Company

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