

**NJ FACE**

# **INVESTIGATION REPORT**



*Fatality Assessment & Control Evaluation Project*

**FACE 06-NJ-063-01**

**August 14, 2007**

## **Worker Pinned Between Forklift and Boom Truck in Industrial Yard**

On July 8, 2006, a 66-year-old male forklift driver was crushed between a load of sheetrock, being carried by a powered industrial truck (forklift), and a boom truck. The incident occurred on a Saturday morning when a two-man crew at a construction supply company was loading sheetrock onto the flatbed of a boom truck to prepare for Monday morning deliveries. The forklift had been left in neutral with the engine running, emergency brake set, and forks elevated. While unattended, the forklift rolled toward the boom truck and pinned the victim between the load of sheetrock supported on the forks and the flatbed of the parked truck.

NJ FACE investigators recommend following these safety guidelines to prevent similar incidents:

- Employers should conduct a job hazard analysis of all work activities with the participation of the workers.
- Employers should institute a safety and health plan that includes standard operating procedures.
- Employers should establish a training program for operators of forklift trucks.
- Employers and employees should become familiar with available resources on safety standards and safe work practices.



**NJ Department of Health & Senior Services**  
Occupational Health Service  
PO Box 360, Trenton NJ 08625-0360  
(609) 984-1863



## INTRODUCTION

On July 13, 2006, NJ FACE was informed about this fatal work-related injury by a federal OSHA compliance officer. A site visit was conducted on July 19, concurrent with the second site visit of the compliance officer. The business owner, operations manager, and workers were informed about the FACE project and agreed to participate. The incident site was viewed and photographed, and coworkers were interviewed. Additional information on the incident was obtained from the police report, the medical examiner's report, and the OSHA investigation file.

The employer was a well-established retail and wholesale construction supply company that had been in business for many years. Most of their customers were contractors, but they also served the general public. The current owner purchased the established business 27 years prior to the incident. There were 30 employees, including the retail store and office staff. Workers were not unionized, except for the truck drivers.

Training was on-the-job. There were no written safety policies or procedures. The operations manager attended a train-the-trainer course to certify forklift operators, and conducted training of the operators at the company. Their certification process required that the worker complete a written test and demonstrate his ability to properly operate a forklift. For workers with either limited or no reading ability, the trainer administered the test orally and completed the written test for the operator. No procedure for periodic evaluation or retraining was in place, although the certifier said that he observed the operators annually but did not document their performance.

The company owned five forklifts and employed three operators. No maintenance was performed by company employees; it was done entirely by an equipment-leasing company, either on-site or at their facility. The forklift involved in the fatality was purchased new in 1999. It was powered by liquid petroleum gas (LPG), and had an automatic transmission and solid tires. It weighed approximately 13,500 pounds and had a functioning seat belt and an intact roof. It was reported that for several months prior to the incident, there had been problems with the emergency brake not holding when it was left with the forks elevated above the ground and carrying a load. The forklift had been serviced four times in the twelve months prior to the fatal

incident. The brakes were serviced in December, 2005, and April, 2006.

The victim was a 68-year-old male foreman who worked for the company as a forklift operator for 20 years and had approximately 10 years prior experience with another employer. Certified by the company in November, 1999, he was considered very safety conscious, frequently addressing other workers for incidents that he considered unsafe. He was survived by his wife and a brother.

## INVESTIGATION



The building supply company was located in a large New Jersey city and consisted of a retail store, offices, warehouse, and industrial yard. The fatal injury occurred on a summer Saturday morning at approximately 8:15 a.m. The retail store was open and one laborer was occupied in the warehouse. Two forklift operators were present to load two boom trucks with

products to be delivered the following Monday morning, a process that usually took approximately 15 to 30 minutes per load. No truck drivers were present. It was customary on a Saturday to complete the loading and leave for the day when finished. The retail store closed at noon. The two forklift operators arrived at work at 5:30 a.m.

The incident site was a paved asphalt industrial yard with a 7 foot, 11 inch, central concrete pad, under which was the storage tank of diesel fuel used to supply the trucks. The concrete pad was elevated approximately one inch above the surrounding asphalt pavement. The yard had a slight grade. Supplies such as sheet rock were stored under covered open-front sheds located on both sides of the yard.



Forklift involved in the incident (rear view)

On the day of the incident, two boom trucks were lined up to be loaded. At 8 a.m., the two men had almost completed loading the first truck. The victim (operator #1) used his forklift to move sheet rock and deposit the load on one side of the truck while operator #2 did the same on the opposite side. The victim parked his unloaded forklift near the rear of the boom truck, turned off the engine, and dismounted to pick up dunnage (strips of sheetrock used to create space between piles of sheetrock to enable the forks to be inserted to pick up the load). Operator #2, who had 34 years experience and had been certified by the company in November, 1999, also parked and exited his truck, with the engine running, to pick up dunnage.

His forklift carried 22 sheets of 1/2-inch sheetrock (weighing approximately 2000 pounds) on the forks that were raised approximately three feet above the ground. According to operator #2, his truck was in neutral and the emergency brake was set. He reportedly parked it approximately a shoulder's width from the boom truck. Operator #2 was bent over, facing away from the work area when he heard the victim yell for help. The forklift had rolled from its parked position and pinned the victim between the load of sheet rock and the side of the boom truck's flatbed. The operator ran to the forklift and backed it away from the victim, who fell to the pavement. He then ran into the warehouse for help and the warehouse worker called 911. Emergency services arrived and transported the victim to a local hospital emergency department where he was pronounced dead at 8:45 a.m.

## RECOMMENDATIONS/DISCUSSIONS

### **Recommendation #1: Employers should conduct a job hazard analysis of all work activities with the participation of the workers.**

Discussion: To prevent incidents such as this, NJ FACE recommends that employers conduct a job hazard analysis (JHA) of all work areas and job tasks, with input from the employees. A JHA is a procedure that breaks a job or task into specific steps, analyzes each step for specific

hazards, and uses this information to develop safe work practices to eliminate or reduce identified hazards. A JHA should begin by reviewing the work activities for which the employee is responsible and the equipment that is needed. Each task is further examined for mechanical, electrical, chemical, or any other hazard that the worker may encounter. The results of the analysis can be used to design a written standard operating procedure (SOP) for the job. Additional information is available in the publication, *Job Hazard Analysis*, which is available on the federal OSHA website at [www.osha.gov/Publications/osha3071.pdf](http://www.osha.gov/Publications/osha3071.pdf).

**Recommendation #2: Employers should institute a safety and health plan that includes standard operating procedures.**

**Discussion:** Company safety and health policies, including standard operating procedures, should be in writing and be based upon the results of the job hazard analysis. Having policies in writing fosters consistency and makes rules and standards clear to all workers. A written safety and health policy should include organized training and education of workers, and regular updating of standard operating procedures.

**Recommendation #3: Employers should incorporate an evaluation component in their training program for operators of forklift trucks.**

**Discussion:** OSHA standard, CFR 1910.178, requires employers to establish and maintain a formal program of training, evaluation, and retraining for users of powered industrial trucks, including forklifts. Although the company initially trained and evaluated the operators, there was no system in place for reevaluation. Suggested practices would include periodic observation of drivers and their practices, providing refresher training, and determining if an operator continues to be competent to operate the industrial trucks.

During the NJ FACE site visit, operators were observed driving forklifts with loads elevated and leaving the trucks unattended, topics included in the OSHA standard. It is suggested that workers who do not operate these trucks also be trained in order to increase their awareness of how to safely work in an environment in which they are used. It is also suggested that the employer work with a consultant from their supply company to determine if their present forklifts are adequate to handle the loads for which they are being used.

Two operators reported a history of failure of the emergency brake on the involved forklift. Service was performed four times in the previous year and the brakes were serviced twice. The forklift was examined by representatives from the forklift supplier and insurance company. FACE staff could not obtain a report on this examination. Therefore, no recommendations can be made addressing the presence or absence of mechanical defects.

**Recommendation #4: Employers and employees should become familiar with available resources on safety standards and safe work practices.**

### **RECOMMENDED RESOURCES**

It is extremely important that employers obtain accurate information on health, safety, and applicable OSHA standards. NJ FACE recommends the following sources of information which should help both employers and employees:

#### **U.S. Department of Labor, Occupational Safety & Health Administration (OSHA)**

Federal OSHA will provide information on safety and health standards on request. OSHA has four area offices in New Jersey that cover the following counties:

- ☎ Hunterdon, Middlesex, Somerset, Union, and Warren counties ..... (732) 750-3270
- ☎ Essex, Hudson, Morris, and Sussex counties ..... (973) 263-1003
- ☎ Bergen and Passaic counties ..... (201) 288-1700
- ☎ Atlantic, Burlington, Cape May, Camden, Cumberland, Gloucester, Mercer, Monmouth, Ocean, and Salem counties ..... (856) 396-2594
- 💻 Federal OSHA Website: [www.osha.gov](http://www.osha.gov)

#### **New Jersey Public Employees Occupational Safety and Health (PEOSH) Program**

The PEOSH Act covers all NJ state, county, and municipal employees. Two state departments administer the act; the NJ Department of Labor and Workforce Development (NJDLWD), which investigates safety hazards, and the NJ Department of Health and Senior Services (NJDHSS), which investigates health hazards. PEOSH has information available that may also benefit private employers.

NJDLWD, Office of Public Employees Safety

☎ Telephone: (609) 633-3896

💻 Website: [www.nj.gov/labor/lsse/lsppeosh.html](http://www.nj.gov/labor/lsse/lsppeosh.html)

NJDHSS, Public Employees Occupational Safety & Health Program

☎ Telephone: (609) 984-1863

💻 Website: [www.state.nj.us/health/eoh/peoshweb](http://www.state.nj.us/health/eoh/peoshweb)

**New Jersey Department of Labor and Workforce Development,**

**Occupational Safety and Health On-Site Consultation Program**

This program provides free advice to private businesses on improving safety and health in the workplace and complying with OSHA standards.

☎ Telephone: (609) 984-0785

💻 Website: [www.nj.gov/labor/lsse/lsonsite.html](http://www.nj.gov/labor/lsse/lsonsite.html)

**New Jersey State Safety Council**

The New Jersey State Safety Council provides a variety of courses on work-related safety.

There is a charge for the seminars.

☎ Telephone: (908) 272-7712.

💻 Website: [www.njsafety.org](http://www.njsafety.org)

**Internet Resources**

Other useful Internet sites for occupational safety and health information:

💻 CDC/NIOSH - [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

💻 Employment Laws Assistance for Workers and Small Businesses - [www.dol.gov/elaws](http://www.dol.gov/elaws)

💻 National Safety Council - [www.nsc.org](http://www.nsc.org)

💻 American National Standards Institute (ANSI) - [www.ansi.org](http://www.ansi.org)

💻 Product recall information - [www.recalls.gov](http://www.recalls.gov)

💻 NJDHSS FACE reports - [www.state.nj.us/health/eoh/survweb/face.htm](http://www.state.nj.us/health/eoh/survweb/face.htm)

💻 CDC/NIOSH FACE - [www.cdc.gov/niosh/face](http://www.cdc.gov/niosh/face)

**Fatality Assessment and Control Evaluation (FACE) Project**  
**Investigation # 06-NJ-63-01**

Staff members of the New Jersey Department of Health and Senior Services, Occupational Health Service, perform FACE investigations when there is a report of a targeted work-related fatal injury. The goal of FACE is to prevent fatal work injuries by studying the work environment, the worker, the task and tools the worker was using, the energy exchange resulting in the fatal injury, and the role of management in controlling how these factors interact. FACE gathers information from multiple sources that may include interviews of employers, workers, and other investigators; examination of the fatality site and related equipment; and reviewing OSHA, police, and medical examiner reports, employer safety procedures, and training plans. The FACE program does not determine fault or place blame on employers or individual workers. Findings are summarized in narrative investigation reports that include recommendations for preventing similar events. All names and other identifiers are removed from FACE reports and other data to protect the confidentiality of those who participate in the program.

NIOSH-funded state-based FACE Programs include: California, Iowa, Kentucky, Massachusetts, Michigan, New Jersey, New York, Oregon, and Washington. Please visit the NJ FACE website at [www.state.nj.us/health/eoh/survweb/face.htm](http://www.state.nj.us/health/eoh/survweb/face.htm) or the CDC/NIOSH FACE website at [www.cdc.gov/niosh/face](http://www.cdc.gov/niosh/face) for more information.

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Daniel Lefkowitz, Ph.D.  
FACE Project Coordinator  
Occupational Health Surveillance Program

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Emily O'Hagan, R.N., M.P.H.  
FACE Investigator  
Occupational Health Surveillance Program

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James Blando, Ph.D.  
FACE Investigator  
Occupational Health Surveillance Program

---

Donald Schill, M.S., CIH  
Research Scientist  
Occupational Health Surveillance Program

---

David Valiante, M.S., CIH  
FACE Principal Investigator  
Occupational Health Surveillance Program

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Gary Ludwig, M.S.  
Director  
Occupational Health Service

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Eddy A. Bresnitz, M.D., M.S.  
Deputy Commissioner/State Epidemiologist  
Public Health Services

