August 27, 2002

Nebraska FACE Investigation 01NE006

SUBJECT:

Maintenance Worker Crushed Between Forklift and Truck

SUMMARY:

A 55-year old forklift operator was killed when he was pinned between the forklift mast and the front of a semi tractor trailer truck. A loaded semi tractor-trailer was sitting on a gravel parking lot. The lot had a slight 4 to 5 degree slope to the rear of the truck, and was covered with 1 ½ to 2 ½ inches of ice. The truck operator was unable to gain enough traction to move, so summoned help. The victim brought a forklift and log chain to the scene. He placed the forklift facing towards the front of the truck, dismounted the forklift, and walked to the truck. As he was attaching the chain to the truck's front bumper, the forklift rolled forwards, pinning him between the forklift's mast and the truck. He was taken to a local hospital where he died two hours later.

The Nebraska Workforce Development, Department of Labor's Investigator concluded that to prevent future similar occurrences:

- **Employers should ensure that only trained and authorized operators shall be permitted to operate a powered industrial truck.**
- **Employers should ensure that operator training programs contain all mandatory instructional requirements.**
- **Employers should ensure that powered industrial truck training includes both truck-related and workplace-related topics, i.e. surface conditions where the vehicle will be operated.**
- **Employers should ensure that forklift trucks with known mechanical problems are removed from service until fixed.**
- **Employers should ensure that powered industrial trucks are inspected before being placed into service.**
- **Employers should ensure that refresher training and evaluation is conducted when warranted.**
- **Employers should ensure that recommendations/suggestions made by the established Safety Committee have "persons responsible" assigned, corrective actions taken and the results listed in the monthly meeting minutes.**

PROGRAM OBJECTIVE:

The goal of the Fatality Assessment and Control Evaluation (FACE) workplace investigation is to prevent work-related deaths or injuries in the future by a study of the working environment, the worker, the task the worker was performing, the tools the worker was using, and the role of management in controlling how these factors interact.

This report is generated and distributed **solely** for the purpose of providing current, relevant education to employers, their employees and the community on methods to prevent occupational fatalities and injuries.

INTRODUCTION:

On February 19, 2001 at approximately 10:00 a.m., a 55-year-old maintenance worker died after being pinned between a forklift mast and the front bumper of a semi truck-trailer unit. The Nebraska Department of Labor was notified of the fatality the same day by the Occupational Safety and Health Administration (OSHA). The Nebraska FACE Investigator spoke several times with company officials, but was not allowed access to site or pertinent records. The FACE Investigator did meet with the investigating OSHA Compliance Officer (COSHA) on several occasions to review documentation, incident site photos and to discuss particular facts of the mishap. Documentation was also obtained from the County Sheriff's office.

The employer is a manufacturer of hardwood flooring and is a major producer of kitchen and bathroom cabinets (SIC Code 2434) with plants located throughout the world employing over 6800 personnel. This particular facility has been manufacturing kitchen and bathroom cabinets for approximately 20 years. At the time of the mishap there were 180 employees. There were 25 to 30 operators of fork trucks in this facility based on training records from 1999 and 2000. The company has 9 forklifts at this location, 4 of which are rentals. The employer has a Safety Committee along with a safety and health program but it did not address the types of hazards which resulted in the fatality. The employer has no previous history of fatalities at this location.

INVESTIGATION:

Victim: The victim was a 55-year-old male. He had been employed by this company since mid 1995 and had been in his present position (maintenance) for two years.

Training: The company provided forklift operator training only in the classroom, normally consisting of a video and written test. They did not provide practical, hands-on initial or refresher training. A forklift operator's card was issued to the victim on March 27, 1996. This was the only documented forklift training identified for the victim.

Equipment: The equipment involved in the incident was a Hyster fork truck weighing 17,900 pounds. This forklift was normally used 2-3 times a month. No daily or pre-task inspections were conducted on the forklift. Maintenance records indicated that company officials were aware of several maintenance problems which included a non-working park brake as early as July 7, 1999. This was a repair order from an outside contractor that indicated: "Park brake does not work". The brake was not fixed until March 12, 2001…after the accident.

ANALYSIS/SYNOPSIS:

The morning of the accident, a semi tractor (1997 Freightliner Conventional) was pulling a bobtail trailer. The operator was attempting to back the trailer into a parking spot between some other trailers.

The gravel parking lot was covered with 1 ½ to 2 ½ inches of ice/snow mixture, making it extremely slick. The lot also has a 4-5 degree slope towards the rear of the trailers. This had been a continual problem all winter. The slope allowed ice and snow to accumulate, causing slick conditions which would cause vehicles to become stuck while connecting/disconnecting trailers. Witness statements indicated that numerous employees had complained to company officials about the situation, but nothing had been done to remedy it.

The operator backed in too close to another trailer, and attempted to pull out to reposition. The victim saw the situation and asked the truck operator if he needed some sand for traction. The victim got into a pickup truck, got the sand and returned. The sand was spread under the truck's drive wheels, but didn't do any good. The victim pulled his pickup truck in front of the semi and attempted to pull it out, but was unsuccessful. The victim then went and got the forklift involved in the incident and was able to pull the semi out. The semi operator drove his tractor-trailer unit around the adjacent building, repositioned and was then able to back into the "hole".

He unhooked the trailer and pulled ahead about two feet before becoming stuck again. The victim came back with the forklift, got off and started hooking up the pull chain to the front of the semi tractor. The semi operator was speaking with his wife in the rear of the tractor. As he turned around he saw the forklift coming towards the victim. He reacted by honking his horn 4 or 5 times but the victim was unable to move in time and was pinned between the forklift's mast and the front bumper/grill of the semi.

The operator got out of his truck and tried to move the forklift but couldn't. Rescue personnel were summoned and arrived a few minutes later from a nearby town. They were able to move the forklift and remove the victim after being pinned for approximately 10 minutes. He was transported to a local county hospital where the decision was made to life flight him to a regional trauma center. He died enroute.

CAUSE OF DEATH:

The cause of death as stated on the death certificate was: Multiple internal injuries.

RECOMMENDATIONS/DISCUSSION:

- **Recommendation # 1 . Employers should ensure that only trained and authorized operators shall be permitted to operate a powered industrial truck.**
  (29 CFR 1910.178(l)(1)

  Discussion: The employer's training program has to ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely, as demonstrated by the successful completion of the program's training and evaluation. None of the company's operators at this location were "current" with training requirements. The victim's last training was in 1996. The employer was aware of the regulatory requirements.

- **Recommendation # 2. Employers should ensure that operator training programs contain all mandatory instructional requirements.**
(29 CFR 1910.178(l)(2)

  Discussion: Training should consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. Although company officials knew the requirements of the standard, they only performed classroom instruction consisting of a video and sometimes a written test afterwards.

- **Recommendation # 3. Employers should ensure that powered industrial truck training includes both truck-related and workplace-related topics, i.e. surface conditions where the vehicle will be operated.**
(29 CFR 1910.178(l)(3)(i),(ii)

  Discussion: The area where the accident occurred was a gravel covered parking lot. This lot had 1 ½ to 2 ½ inches of ice/snow cover, making it extremely slick. Company officials knew of this problem but had not taken any actions to improve it's safety.

- **Recommendation #4 . Employers should ensure that forklift trucks with known mechanical problems are removed from service until fixed.**
(29 CFR 1910.178(p))

  Discussion: If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating conditions. Upon review of different truck maintenance forms it was noted that a problem would be indicated on one day's inspection sheet, the vehicle not removed from service, and the same problem noted on following days sheets, indicating the company's lack of commitment to a good maintenance program. Maintenance records for the incident forklift had initially identified the park brake as being inoperable on July 7, 1999 by a servicing company, 19 months prior to the accident. There were no further daily inspection forms available for this particular forklift. That July 7, 1999 inspection form was subsequently "signed off" after the brake was fixed on March 12, 2001, almost a month after the accident. There was no record to indicate that the lift was removed from service after the accident until the brake was fixed. Company officials were aware of the standard requirements.

- **Recommendation #5 . Employers should ensure that powered industrial trucks are inspected before being placed into service.**
(29 CFR 1910.178(q)(7)

  Discussion: There were two inspection sheets found for the incident forklift, one dated July 7, 1999 and the other December 29, 1999. Both showed the park brake cable needed to be replaced. The first was completed by a service company, not a company employee/operator. It is not known who completed the second one. Other forklift records were requested and very few provided. Such examinations shall be made at least daily if being used. If a truck is being used around-the-clock, they shall be examined after each shift. Any defects found shall be immediately reported and corrected. Company officials were aware of the standard requirements.

- **Recommendation # 6. Employers should ensure that refresher training and evaluation is conducted when warranted:**
(29 CFR 1910.178(l)(4)(i)

  Discussion: Speeding on the forklifts and non-use of seatbelts was a constant problem. Employees interviewed, both management and laborers, were unsure of what the company's policy on seatbelts was. No refresher training had been conducted for operators violating this requirement. 29 CFR 1910.178 does not have provisions for the use of seat belts. However, Section 5(a)(l) of the OSH Act require employers to protect employees from serious and recognized hazards. Recognition of the hazard of powered industrial truck tip over and the need for the use of an operator restraint system is evidenced by certain requirements in the more current versions of ANSI B56.1 consensus standard for powered industrial trucks. OSHA's enforcement policy relative to the use of seat belts on powered industrial trucks is that employers are obligated to require operators of powered industrial trucks which are equipped with operator restraint devices or seat belts to use the devices. Company officials were aware of these requirements.

- **Recommendation #7. Employers should ensure that recommendations/suggestions made by the established Safety Committee have "persons responsible" assigned, corrective actions taken and the results listed in the monthly meeting minutes.**
(Nebraska State Statute 48-443 to 48-447, and Rules & Regulations, Title 230, Chapter 6.8)

  Discussion: State law requires the establishment of a company Safety Committee that has equal representation of both management and employees. The established Safety Committee discussed and documented the following just prior to the accident:

  …Forklift safety was a big issue with many complaints filed with respect to operators driving too fast.

  …Also forklift safety continues to be a problem, with employees walking under loads.

  There was no further documentation to show these two problem areas had been assigned someone responsible to correct them.

ATTACHMENTS:

None.

REFERENCES:

29 CFR 1910.178, General Industrial Standard for Powered Industrial Trucks.

OSHA Directive CPL 2-1.28A, Compliance Assistance for the Powered Industrial Truck Operator Training Standards, November 30, 2000.

American National Standards Institute (ANSI) B56.1-1969 Safety Standard for Powered Industrial Trucks

State of Nebraska, Department of Labor, Safety & Labor Standards Division, LB 757 – Workplace Safety Consultation Program, Title 230, chapter 6.8, October 6, 1994.