April 17, 1995

Nebraska FACE Investigation 95NE013

SUBJECT:

Worker Crushed between Forklift and Flatbed Trailer

SUMMARY:

A 43 year-old male died after being crushed between a forklift and a flatbed trailer. The victim was in the process of covering materials on the flatbed trailer with a tarpaulin at the time of the incident. He was standing on the ground by the flatbed trailer when a forklift, bringing some twine to tie down the tarpaulin, approached the flatbed trailer. The brakes on the forklift failed and the victim was crushed between the forklift and the flatbed trailer and died about one hour later at a local hospital.

The Nebraska Department of Labor (NDOL) investigator concluded that to prevent future similar occurrences, employer should:

*Establish a comprehensive training program for all personnel operating specialized machinery to include "hands-on" training and documentation.

*Establish and enforce a thorough vehicle maintenance and inspection program.

*Develop, implement and enforce a comprehensive safety program that includes but is not limited to, training in all hazard recognition.

PROGRAM OBJECTIVE:

The goal of the 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 the community on methods to prevent occupational injuries.

INTRODUCTION:

On February 11, 1995, at 11:20 am, a 43 year-old manufacturing plant subcontractor died as a result of injuries sustained when he was pinned between a forklift and a flatbed trailer. NDOL first became aware of this incident by reading about it in the newspaper. The Nebraska FACE investigator accompanied an OSHA investigator to the incident site on February 13, 1995, and spoke with the plant supervisor and examined the forklift involved in the incident. No witnesses

were available on the 13th so the FACE and OSHA investigators returned February 14, 1995, to interview them and speak with other company employees.

The employer is a manufacturer of glass fiber reinforced concrete for exterior panels in buildings. This company has been in business for 16 years and employs 48 people. This was the first fatality in the history of the company. The company has a written safety program but does not have a full time safety manager. Safety responsibilities are handled by someone with other primary duties.

INVESTIGATION:

The victim was a subcontractor to the manufacturing company where the incident occurred. He had worked as a subcontractor for this company the past four years. The incident occurred on a Saturday morning while the victim and two other workers were preparing some glass fiber reinforced concrete panels for transport on a flatbed trailer.

The victim and the two other individuals were the only individuals on site at the time of the incident. They had been on site for several hours when the incident occurred. The three individuals were covering a load of panels with a tarpaulin on a flatbed trailer which was parked outside. It was windy and cold with a temperature of 6° and a wind of 16 mph, which gave a wind chill of -25°. They had put the tarpaulin over the panels and realized they needed twine to tie it down. One individual then drove a forklift to the main building to get the twine.

When he returned, the victim and another individual were standing on the ground next to the flatbed trailer. The driver of the forklift was approaching the flatbed trailer head-on and let his foot off the accelerator expecting the forklift to slow down. The forklift did not slow down so he hit the brakes, which did not work. One of the individuals standing by the flatbed trailer said he saw the driver pumping the brakes but to no avail. He yelled at the victim to get our of the way but the victim evidently did not hear him. It was very noisy due to the winds blowing the tarpaulin as well as the sound of the forklift. When the driver realized the brakes were not working he swerved away from the victim to try to avoid hitting him. The forklift spun around and the victim was crushed between the rear of the forklift and the top of the bed on the flatbed trailer. He suffered a collapsed right lung and other chest injuries. Immediately, 911 was called and an EMT unit responded and transported the victim to a local hospital where he died at 12:58 p.m. the same day.

A physical investigation of the incident forklift revealed the brake master cylinder was empty. Also the horn on the forklift was not operational. This forklift had not been checked out prior to use on the day of the incident. Furthermore, the accelerator mechanical linkage on the forklift and the area around it, had an excessive buildup of grease and dirt. This could have possibly caused the accelerator to become stuck therefore accounting for the forklift not slowing down when the accelerator pedal was released. There was no training program or documentation for forklift operator training.

CAUSE OF DEATH:

The cause of death as listed on the death certificate was blunt trauma to the chest and abdomen.

RECOMMENDATIONS/DISCUSSION:

Recommendation #1: Establish a comprehensive training program for all personnel operating specialized machinery to include "hands-on" training and documentation.

Discussion: In accordance with 29 CFR 1910.178(l), only trained and authorized operators shall be permitted to operate a powered industrial truck. A specific training plan should be developed for each piece of specialized machinery. This plan should cover all basic operating procedures and all safety precautions. One of the items that should be addressed in the forklift training is the importance of not driving towards individuals standing in front of a fixed object, such as the flatbed trailer in this case. All training should also be well documented. This would assist an employer in knowing who is authorized to operate what specific equipment.

Recommendation #2: Establish and enforce a thorough vehicle maintenance and inspection program.

Discussion: 29 CFR 1910.178(q)(7) states that industrial trucks shall be examined before being placed into service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. It further states this examination shall be made at least daily. Had this forklift been properly inspected the morning of the incident the problem with the brakes should have been detected and thus this incident may have been prevented. The inspection should have also detected the non-operational horn which, if working, could have alerted the victim to move out of the path of the forklift Periodic cleaning of the mechanical linkages could also help prevent incidents as well as improve operation of equipment Furthermore, in accordance with 29 CFR 1910.178(p)(1), any power-operated industrial truck not in safe operating condition shall be removed from service. Had this forklift been taken out of service until properly repaired, this incident may not have occurred.

Recommendation #3: Develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in all hazard recognition.

Discussion: A key factor in any safety program is compliance and enforcement. When requirements, such as daily inspections of equipment, are written in a safety plan they must be complied with and enforced. Compliance can be monitored by spot inspections by supervisors and management and when violations are noted, appropriate action must be taken.

REFERENCES:

1. Office of the Federal Register National Archives and Records Administration, Code of Federal Regulations, Labor, 29 CFR 1910.178, 1993.

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