KY FACE #98KY116
Date of Incident: November, 1998
Report Release Date: February 4, 1999

Road Construction Worker Killed in Tractor Overturn

Summary

In November 1998, a 33-year-old male construction worker was killed when the tractor he was driving overturned. The victim worked for a construction company that had been in business for approximately 30 years and did commercial and residential work. The victim and another construction worker were finishing a driveway paving job for a private household and had been working for a couple of hours. The tractor was being used to sweep dirt off the highway. Because this job was complete, the victim was trying to load the tractor onto a lowboy that was parked on the main road so that it could be transported to another location. The tractor had a front, brush attachment on it. As the victim tried to back the tractor onto the lowboy, the attachment was dragging and causing the back tires to spin. The victim then attempted to turn the tractor around on the two-lane road by exiting off the lowboy in a forward direction and making a U-turn. The driver apparently drove too close to the side of the road and the tractor fell over the embankment, landed on an old road, and then landed on the driver. A witness who had been watching for traffic while loading the tractor ran to a nearby house to get assistance and call 911. The coroner was called to the scene by State Police and pronounced the victim dead. The cause of death was massive head injury.

Introduction

FACE investigators were informed on 15 December 1998 of the death of a construction worker. The incident occurred on 15 December 1998. An investigation was initiated and a site visit made on 12 January 1999. An interview was held with the county coroner who was summoned to the site. Photographs were taken of the scene and copies of the coroner's investigation report and the State Police report were obtained. A follow-up phone call was made to the witness of the incident and the supervisor of the victim.

The victim worked for a construction company that began in the 1960s. The company did both commercial and residential work. The supervisor of the victim had planned on laying off the employees for the winter season but decided to let them work one more week to earn some additional Christmas money. It is unknown how long the victim had worked for the construction company.

Investigation

The day of the incident was a sunny, clear day and unusually warm for this time of the year. The victim and a co-worker were completing a job fixing a driveway for a private household. The morning of the

incident, they were using a tractor with a brush attachment to sweep dirt and debris created from the job off the adjoining highway. Once they had completed this task, they were to load the tractor onto a tractor trailer with a lowboy so that it could be transported to another site. The victim tried to back the tractor onto the lowboy while his co-worker watched for oncoming traffic. The victim began having difficulty because of the brush attachment. As he backed up the lowboy, the angle of the tractor caused the brush attachment to drag on the road and the back tires to spin. He apparently decided this was not going to work and pulled off the lowboy to turn the tractor around on the road. As he was turning the tractor to his right, the front end came too close to the edge of the road and pulled the rest of the tractor over the embankment. The tractor knocked over posts that lined the road as it fell, and came to a rest on an old road with the victim underneath the back, left wheel. The hill next to the road was steep with an approximate 75 degree slope. The co-worker went to a nearby house and asked someone to call 911. The State Police and coroner responded to the incident. The coroner pronounced the victim dead at 12:01 p.m. and noted that the victim most likely died instantly. The incident happened around 11:00 a.m.

Cause of Death

The death certificate listed the cause of death as massive head trauma.

Recommendations/Discussion

Recommendation No. 1: Tractor owners should contact their county extension agent, equipment dealer or equipment manufacturer to see if retrofit rollover protection and operator restraint systems are available for their equipment.

Discussion: The tractor involved in this incident, manufactured in 1955, was not equipped with ROPS or a seatbelt, which protect the operator in the event of a rollover, and in the instant case might have prevented the operator being thrown from the tractor. ROPS first became available as optional equipment on farm tractors in 1971. These safety features were not required on tractors, however, until 1976, when OSHA Standard 29 CFR 1928.51 went into effect. This standard states in part:

A roll-over protective structure (ROPS) shall be provided by the employer for each tractor operated by an employee. Where ROPS are required by this section, the employer shall: (A) Provide each tractor with a seatbelt...; (B) Ensure that each employee tightens the seatbelt sufficiently to confine the employee to the protected area provided by the ROPS. Although this standard does not apply to tractors manufactured prior to 1976, and thus would not apply to the 1955 model tractor in this case, it is possible to retrofit older tractors with ROPS and seatbelts, and it is strongly recommended that this be done whenever possible. Tractor owners should contact dealers, manufacturers, or county extension agents for information on sources of retrofit ROPS and operator restraint systems.

Recommendation No. 2: Employees who operate tractors as part of their job duties should be required to undergo formal safety training in tractor operation.

Discussion: Employees who operate tractors should attend safety courses and receive materials to enable them to identify hazards, evaluate risks, and develop safe operating procedures. This information

should remain easily accessible to operators. This is an avenue by which county extension agents could be effective in intervention and prevention.

Recommendation No. 3: Equipment should be kept in good working condition.

Discussion: The brakes on this tractor were in need of repair. Although it is not known whether it would have changed the outcome in the instant case, proper preventive and routine maintenance can reduce risk and minimize injury due to equipment failures.

Although it would not have made a difference in this case, since 911 telephone service is universally recognized by the public as the number to call in the event of an emergency, it should be implemented countywide.

References

1. Effectiveness of Roll Over Protective Structures for Preventing Injuries Associated with Agricultural Tractors. MMWR 42(03);57-59.

2. Standard Number 1928.51, Subpart C, US Department of Labor, Occupational Safety and Health Administration, OSHA CD-ROM (OSHA A94-2), February 1994.

3. US Department of Health and Human Services, PHS Centers for Disease Control and Prevention, NIOSH UPDATE, January 29, 1993.

The Kentucky Fatality Assessment & Control Evaluation Program (FACE) is funded by a grant from the Centers for Disease Control and the National Institute of Safety and Health. FACE's purpose is to aid in the research and prevention of occupational fatalities by evaluating events leading to, during, and after a work related fatality. Recommendations are made to aid employers and employees to have a safer work environment. Current focuses of the program are occupational fatalities involving: construction, machinery, immigrant workers (particularly Hispanics) and youth.

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