

Fatality Assessment and Control Evaluation Project

Public Health

KY FACE #98KY046

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TO: Michael Auslander, DVM, MSPH, Kentucky Department for Public Health, Division of Epidemiology, Surveillance and Investigations Branch

FROM: Ellyn Moon, MA, KY FACE Project Investigator

SUBJECT: Tractor Operator Killed by Rotary Mower while Mowing Highway Right-of-Way

SUMMARY

A 23-year-old male (the victim) was killed when he fell from the tractor he was operating and was run over by the attached rotary mower. The victim had been mowing near an interstate highway on-ramp at about 1:15 pm, when his right front tractor wheel hit a concrete drainage culvert, apparently jolting him off, into the path of the mower. Although he was working with a crew, none of his co-workers witnessed the event. A passing commercial truck driver saw the victim fall, pulled over, and called emergency medical services (EMS) on his cellular phone. EMS personnel arrived within minutes and took the victim to the local hospital and on to the airport in a nearby town for air ambulance transport to a regional trauma center, where he died at 5:03 pm. In order to prevent similar incidents, the KY FACE investigator recommends that:

- *operators of ROPS-equipped tractors should always wear seatbelts; employers should train and require all employees to wear them, and should enforce their use; and,*
- *tractor operators should always examine the area, take into consideration environmental conditions and terrain, and make necessary adjustments to accommodate to them.*

INTRODUCTION

On July 11, 1998, KY FACE was notified of the death of a 23-year-old male tractor operator on July 9. An investigation was initiated through contact with the Kentucky State Police trooper handling the case, and the KY FACE investigator travelled to the scene on July 30. The vice-president of the company that employed the victim was interviewed, and he shared his photographs of the scene. The equipment involved was photographed, and the mechanic who regularly serviced it was interviewed. The foreman who had been on duty on the day of the incident was also interviewed. Later, copies of the Occupational Safety and Health (OSH) and the Kentucky State Police reports were obtained and reviewed.

The employer was a scrap metal company that had been in business at this location for 24 years, and had been contracting with the state to mow highway rights-of-way for 21 years - as long as the state had been contracting such work out. The company employed from 40 to 100 persons, depending on the season; at the time of this incident there were 60 employees. The company held weekly safety meetings for all employees. Three of the company's foremen had been mowing 21 years. Whenever a new tractor operator was hired, one of those three foremen would work closely with the new operator to train him. Most of the tractor operators had grown up on farms, and so were experienced tractor drivers before coming to the company. This was the first fatality experienced by the company.

The company owned 30 tractors, all Fords, most less than five years old. The tractor involved in this incident was a 1989 Model 4610. All the tractors were equipped with rollover protective structures (ROPS) and seatbelts, and were maintained in excellent operating condition by a full-time mechanic. The rotary mower attached to the tractor was a 5-foot-wide "Trim Tractor," used to mow the smaller areas that the 20-foot mowers could not reach.

The victim began working for the employer approximately six months prior to the incident. Reports indicate that he had grown up on a farm and so had prior experience with tractors. He was regarded by his foreman as a cautious worker. He had no previous record of injury.

INVESTIGATION

On the day of the incident, the victim and his crew had begun work at 7:00 a.m. The entire crew consisted of 15-20 men. Six of them operated tractors with mowers attached, and the rest operated trimmers and picked up litter. The crew was dispersed over a large area, with the men working on different ramps and areas of the highway right-of-way. They had stopped for lunch, and had started work again at 1:00 p.m. The incident happened between 1:00 and 1:15. Another tractor operator was pulling a 20-foot rotary mower, mowing the wide, flat area between the northbound highway roadside and the embankment. The victim would come along behind him pulling the 5-foot mower to get to the smaller areas the first mower could not reach. His right front tractor wheel apparently struck a concrete drainage culvert near the roadside. The culvert was built at an angle of about 45 degrees. The tractor wheel struck the culvert about six inches above the ground. It is not known for certain if the victim was jolted from the tractor when the

wheel hit the culvert, or if he fell from the tractor just prior to the wheel hitting the culvert. When the victim fell from the tractor he was run over by the 5-foot rotary mower. His tractor turned to the right, continued up the embankment, around and back down; it went across the highway, into the median, turned and went back across the highway, where it hit the guardrail. Here it stopped but continued running; one of its tires dug a hole in the blacktop. The tractor was found to be in low gear.

A passing truck driver saw the victim fall and used his cellular phone to call 911. He stopped and attempted to alert other traffic to the driverless tractor. EMS personnel arrived within minutes and took the victim to the local hospital and on to the airport in a nearby town for air ambulance transport to a regional trauma center, where he was pronounced dead at 5:03 pm.

CAUSE OF DEATH

The cause of death was stated on the death certificate as “multiple injuries.”

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Operators of ROPS-equipped tractors should always wear seatbelts; employers should train and require all employees to wear them, and should enforce their use (49 CFR Part 571).

Discussion: The tractor in this case was equipped with a functioning seatbelt, and all tractor operators were required by company policy to wear them. However, company policy was not enforced. If the victim had been wearing his seatbelt it probably would have prevented him from being thrown from the tractor.

Recommendation #2: Tractor operators should always examine the area, take into consideration environmental conditions and terrain, and make necessary adjustments to accommodate to them.

Discussion: In this case it is believed that the victim’s right front tractor wheel struck a concrete drainage culvert. If he had examined the area and noticed the culvert in advance, he might have been able to avoid it.

REFERENCES

49 CFR Part 571. Department of Transportation, Federal Motor Vehicle Safety Standards.

Citation and Notification of Penalty. Kentucky Labor Cabinet, Occupational Safety and Health Program.