

*F*atality
*A*ssessment and
*C*ontrol
*E*valuation Project

Public Health

KY FACE #96KY089

3 October 1996

TO: Carl Spurlock, PhD, Director of the Kentucky Injury Prevention and Research Center (KIPRC)

FROM: Ellyn Moon-Hampton, MA, Fatality Assessment and Control Evaluation (FACE) Field Investigator

SUBJECT: Logger Killed by Falling Snag

SUMMARY

A 54-year-old logger (the victim) was killed after being struck on the head by a falling snag (dead standing tree). The victim was cutting the last tree to make up a load (3 trees) for the skidder. The driver was about 10-15 feet away, waiting for the last tree. He did not witness the incident. When the victim felled the tree, a nearby dead tree broke at a point approximately 12 feet up. The dead tree fell directly on the victim, striking him on the crown of the head. He was not wearing any type of head protection at the time of the incident. The victim was removed by emergency medical services (EMS) personnel to the highway, a distance of more than three miles, where he was transferred to a helicopter to be taken to a trauma center. He died after reaching the hospital. The KY FACE investigator concluded that, to prevent similar occurrences, the following precautions should be taken:

- Ensure that tree fellers properly evaluate the area around timber to be felled so that potential*

hazards can be identified and appropriate control measures implemented

- *Provide and enforce the use of personal protective equipment (PPE)*
- *Ensure that emergency messages can be transmitted quickly*
- *Designate a qualified person to conduct regular safety inspections*
- *Loggers should attend the Master Logger Program for education regarding logging standards and safety practices*

INTRODUCTION

On August 26, 1996, a 54-year-old logger died after being struck on the head by a falling snag. KY FACE was notified of the incident on August 28. On September 18, 1996, a FACE investigator traveled to the scene. The owner of the logging company was interviewed, and photographs and measurements of the scene were taken. The instructor of the Master Logger Program was later interviewed by telephone. The county coroner was not involved in this case since the victim died at a hospital in another county.

INVESTIGATION

The victim had worked as an independent contractor for a family-owned logging company for about four years, and had known the owner of the company all his life. The other workers were the owner's son and two grandsons. The company did not own the land on which the incident occurred, but had purchased the timber from the landowner. They were cutting pulpwood of at least 12-inch diameter.

The victim had been exposed to and worked in logging all his life. He was reported to be very cautious and conscientious in his work. Prior to this incident he had not been ill nor suffered any serious injury, according to the company owner.

Although the victim normally wore a hard hat while working, the day of the incident was very hot and muggy. He took off the hard hat, saying that it was too hot to wear it. In addition to the victim, three members of the family-owned business were working at the logging site, one driving a truck, one helping in the loading area, and one driving the skidder. The skidder driver had suggested to the victim that he take a break and cool off, but he insisted on cutting the third tree, which would make a full load for the skidder. The skidder driver moved about 10-15 feet away while the victim was cutting the 19"-diameter ash. It was about 1:15 pm. When the skidder driver heard the tree fall and the chainsaw continue to run, he went to check and found that the victim had been struck by the snag. He immediately drove out to a mobile home on the highway (over three miles on logging roads) and called 911. EMS logged the call at 1:40 pm. They arrived within minutes, but due to the condition of the logging roads it took some time to remove the victim. It was difficult to get the ambulance in, and impossible to get it the last 200 yards or so into the woods. EMS personnel had to carry the victim out of the woods, and after reaching the ambulance, had to drive the rough three miles back to the highway, where they met the helicopter at 3:55 pm. The victim was airlifted to a trauma center in another county, where he died about 7:30 pm of head injuries. The doctor stated that the victim had never regained consciousness after

being hit by the tree.

The incident was unwitnessed, and evidence at the scene was inconclusive. Nothing at the scene had been moved prior to the FACE site visit. All three trees felled by the victim were still laying as they fell, as was the dead tree. The victim's cap was on the ground, as well as plastic packaging left behind by EMS personnel.

The tree that the victim had cut was an ash, approximately 50 feet tall, with branches at the top only. At the cut line, it was 19 inches in diameter, but at a point ten feet farther up, it was only 11 inches in diameter. The dead tree, a maple, was about nine inches in diameter at the point where it broke, but only 4.5 inches at the top. The break occurred about 12 feet up, and the section that fell was 24 feet long. Both sections of the maple had many obvious holes, and the broken ends revealed a hollow center. It does not appear that the falling tree could have touched the snag as it fell, judging from the height of the first branches on the ash, as well as the angle at which it fell. According to the instructor of the Master Logger Program, it is possible that the vibrations created by the felled tree could have caused the dead maple to break and fall.

CAUSE OF DEATH

We don't have an official report yet.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Ensure that tree fellers properly evaluate the area around timber to be felled so that potential hazards can be identified and appropriate control measures implemented.

Discussion: Fellers should be provided with training in safe work practices and instructed to evaluate their work area prior to beginning work. Such training should include factors such as the lean of the tree to be cut, wind conditions, and the locations of other trees in the immediate work area, as well as the need to identify potential hazards such as dead, broken or rotten limbs or trees (snags). Once identified, any snags should be felled or otherwise removed before commencing logging, as detailed in 29 CFR 1910.266(h)(1)(vi).

Recommendation #2: Provide and enforce the use of personal protective equipment (PPE).

Discussion: 29 CFR 1910.266(d)(1)(vi) requires that approved safety helmets be provided to workers. Employers should provide workers with the required PPE, instruct workers in the proper use of the PPE, and require its use. Although the victim in this case was in the habit of wearing a hard hat, he had removed it because of the heat on the day of the incident.

Recommendation #3: Ensure that emergency messages can be transmitted quickly.

Discussion: Cellular phones or two-way radios should be used by workers who are away from an office or home phone. Cellular phones in particular would enable workers to place emergency calls

immediately.

Recommendation #4: Designate a qualified person to conduct regular safety inspections.

Discussion: To ensure that workers are performing their tasks in the safest possible manner, scheduled and unscheduled safety inspections should be conducted at job sites. Any potential hazards or improper work practices which are identified should be immediately corrected.

Recommendation #5: Loggers should attend the Master Logger Program for education regarding logging standards and safety practices.

Discussion: Loggers should be aware of proper procedures and safety practices to ensure a safe environment for workers. For information about this program, call the University of Kentucky Department of Forestry at (606) 257-5994.

Reference:

29 CFR 1910.266. Code of Federal Regulations, Washington DC: US Government Printing Office, Office of the Federal Register.