The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Timber Cutter Dies After Being Struck by a Falling Snag – West Virginia

FACE 9310

SUMMARY

A 24-year-old male timber cutter (the victim) died after being struck on the head by a falling snag (dead standing tree) on his second day at the worksite. The victim was part of a six-man crew which was selectively cutting a variety of trees to be used for sawtimber. Returning to the worksite after lunch with his co-workers, the victim felled a large poplar tree (in his assigned zone) which came to rest about 10 feet from a snag. Although unwitnessed, evidence suggests that one of the top branches of the falling tree struck a tree adjacent to the snag, or the snag directly, causing the snag to break off. The snag fell, striking the victim on the top of the head, causing the fatal injury. The victim was wearing approved head protection at the time of the incident, but the force of the blow fractured the first vertebra in the victim's neck. NIOSH investigators concluded that, to prevent future similar occurrences, employers should:

- **employers should ensure that workers properly evaluate the area around timber to be felled so that potential hazards can be identified and appropriate control measures implemented**
- **develop, implement, and enforce a written safety program which includes worker training in recognizing, avoiding and abating hazards such as dead standing trees or portions that remain standing (snags), in their work areas**
- **designate a competent person to conduct regular safety inspections.**

INTRODUCTION

On December 3, 1992, a 24-year-old male timber cutter (the victim) was fatally struck on the head by a falling snag while felling trees. On December 5, 1992, the Division of Safety Research (DSR) learned of the incident through a newspaper article, contacted the employer and county coroner, and offered technical assistance. On December 18, 1992, a DSR safety specialist traveled to the county coroner's office and the incident site to conduct an investigation. The investigator reviewed the incident with one of the company's owners, the victim's co-workers, the county coroner, and the West Virginia OSHA compliance officer assigned to the case. The medical examiner's report was requested during the investigation.

The employer in this incident was a logging company that had been in operation for 33 years. The employer had 17 employees, 5 of whom were timber cutters. The employer conducted the logging operation mainly for sawtimber. The employer had no written safety program nor safety policy, but the foreman/timber cutter was responsible for safety talks and impromptu safety inspections and observations. Training of employees was performed on the job by the foreman and

other experienced employees. The victim had been employed by the company for 1 year before the incident, and had about 7 years of logging experience (most of which was working as a timber cutter). He had been on the jobsite for 2 days. This was the first fatality the company had experienced.

INVESTIGATION

The employer had been contracted to selectively cut a variety of timber on a 300-acre tract of land in a mountainous region of the state. Work on the day preceding the incident included cutting and clearing logging roads back into the mountain. On the day of the incident, a woods crew consisting of six workers (two equipment operators, one choke setter, one foreman/timber cutter, and two timber cutters, including the victim) arrived at the worksite at 7:30 a.m. The victim and the other timber cutter had been assigned to fell trees in separate zones (a wooded area allotted to a cutter), each with a slope of less than 5 percent. Although there were no eyewitnesses to the incident, evidence suggests the following sequence of events.

The victim began cutting and felling trees at about 7:45 a.m. on the day of the incident; this task continued until around 11:30 a.m. After lunch, the victim and a co-worker returned to their worksites and the victim felled a 80 to 90-foot-tall, 18-inch- diameter poplar tree, using a 24-inch-bar chain saw. As the poplar fell to ground, it struck a snag about 10 feet away. The snag, which was 35 feet tall and 6 inches in diameter, broke off approximately 4 feet above the ground. The snag fell toward the victim, who was apparently looking in the opposite direction, and struck him on the top of the head (Figure). Although the victim was wearing approved head protection, the force of the blow fractured the first vertebra in the victim's neck.

The co-worker, who was standing about 50 yards away, by coin- cidence looked over toward the victim right after the snag struck him. The co-worker ran over to the victim, removed the snag, which was resting across the victim's body, then ran to inform the foreman, who in turn instructed another worker to call the emergency medical service (EMS). The foreman and two workers returned to the victim and performed cardiopulmonary resuscitation (CPR) until the arrival of the EMS, about 15-20 minutes after they were notified. The EMS continued CPR and transported the victim to the local hospital where he was pronounced dead about 1 hour after the incident.

CAUSE OF DEATH

The coroner listed the cause of death as fracture of the first vertebra.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should ensure that workers properly evaluate the area around timber to be felled so that potential hazards can be identified and appropriate control measure implemented.

Discussion: In the course of regular operations, a daily general inspection should be conducted at the work area. This evaluation 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. Then potential hazards such as dead, broken, or rotten limbs or trees (snags); logs; rootwads; rocks; spring poles; lodged trees; and overhanging limbs, need to be identified. Once identified, the hazards should be felled or otherwise removed before commencing work.

[Note: Currently, OSHA Standard 1910.266 applies to pulpwood logging but does not apply to the logging of sawtimber-sized trees, which were involved in this incident. OSHA is currently revising their logging regulations to include all types of logging operations. Although not enforceable, sections of 1910. 266 of the pulpwood standard, particularly relating to safe work practices, do apply in this case.]

Recommendation #2: Employers should develop, implement, and enforce a written safety program which includes worker training in recognizing, avoiding, and abating hazards such as dead standing trees or portions that remain standing (snags), in their work areas.

Discussion: In this incident, the victim had felled a tree which ultimately caused a snag to fall, resulting in a fatal injury. Employers should evaluate tasks performed by workers, identify all potential hazards, and then establish and enforce a written safety program addressing these issues. The safety program should include, but not be limited to, training in safe work practices including the evaluation of work areas prior to beginning work.

Recommendation #3: Employers should designate a competent person to conduct regular safety inspections.

Discussion: Conducting regular safety inspections of all logging tasks (among other safety-related responsibilities) by a competent person[1] will help ensure that established company safety procedures are being followed. Additionally, scheduled and unscheduled safety inspections of tree feller worksites clearly demonstrate that the employer is committed to the safety program and to the prevention of occupational injury.

REFERENCES

Office of the Federal Register: Code of Federal Regulations, Labor 29 Part 1910.266, pp. 678 and 680 July 1, 1989.

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[1] Competent person – one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate them.

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Last Reviewed: November 18, 2015