Fatality **A**ssessment and **C**ontrol **E**valuation Project

Public Health

KY FACE #98KY099

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SUBJECT: Knotted Log Rolls Off Truck and Kills Logger at Sawmill

SUMMARY

A 42-year-old logger (the victim) was killed when he was struck by a log rolling off a loaded truck at a sawmill. At about 6:10 a.m., the victim and the truck driver arrived at the sawmill with a load of logs on the 20-foot flatbed truck. The stack of logs was rounded above the height of the 53-inch standards and secured by only one chain on the middle of the load. When they arrived, the victim got out of the truck and assisted the driver in backing the vehicle into place for unloading. The victim was in view of the driver during that time. When the truck was in place, the driver put the vehicle in neutral, set the brake and then got out to begin unloading. As he walked around the passenger side of the truck he saw the victim lying on the ground with a 13-foot log nearby. Although the incident was unwitnessed, apparently the victim loosened the chain before the endloader with a log grapple was able to secure the logs. It is likely that the load shifted during transport causing a knotted log on top to move into an unstable position and subsequently roll off. Even though the victim suffered severe head injuries, vital signs were detected. EMS personnel were dispatched after receiving the call for help at 6:15 a.m., arriving on the scene at 6:25. The victim was taken to a local hospital, but died that morning. In order to prevent similar cases from occurring, FACE investigators recommend that:

- The height of the stack of logs should not exceed the standards on the truck;
- Sawmill operators should enforce safe unloading procedures such as not releasing binders until a loader is able to secure the load of logs;
- Loggers/truck drivers should ensure that binders/chains sufficiently secure the logs to avoid movement during transit;
- Sawmill owners should develop and enforce written safety procedures that include policies for unloading log trucks on the premises; and
- Loggers should attend the Master Logger Program to learn safe logging practices.

INTRODUCTION

On December 1, 1998 a county coroner contacted FACE to report the death of a logger earlier that morning. Investigators traveled to the site on December 3. Interviews were conducted with EMS personnel and the manager of the sawmill (also a paramedic for the EMS). Investigators were shown the site where the incident occurred at the sawmill; the log that rolled off the truck remained at the site. The truck was not available for inspection and the driver was not available for interview. A state police officer responded to the scene and he was interviewed via phone at a later time.

The victim had worked with a small operation of 2-4 loggers for about a year and a half. His primary job was to cut the timber and prepare it for transport to the sawmill, but he came with the driver on the day of the incident to gain more experience in the unloading process. The driver, who owned the truck, had been coming to this sawmill for about a year. Although the victim had been logging for some time, his years of experience in this industry is not known.

The sawmill where the incident occurred is one of the larger mills in the area. No written policies are in place at the mill concerning the unloading procedures although it is the usual practice that a loader secures the logs on a truck before the binders/chains are released.

INVESTIGATION

The night before the incident, the logs cut by the logging crew in a nearby timber tract were loaded onto a 2½-3 ton diesel truck with a 20-foot flatbed trailer. All of the logs on the load were poplar and averaged 13-15 inches in diameter and 13 feet in length. The standards on the flatbed truck measured 53 inches high and although the stack was rounded off at the top, the logs were reportedly not stacked exceedingly high above the standards. As was their usual practice, a single chain in the middle of the load secured the logs on the truck.

The sun was just beginning to rise when the victim and the truck driver arrived at the sawmill the next morning about 6:10 a.m. When they arrived, the victim got out of the truck and assisted the driver in backing the vehicle into place for unloading. He was not wearing a hard hat during these procedures. The dirt and gravel yard was relatively level in the unloading area which was about 30 feet from the main entrance of the sawmill. At this time the binder, which maintains the tension on the chain, had not yet been unfastened and the victim was in view of the driver as he motioned him to back up into position. When the truck was in place, the driver put the vehicle in neutral, set the brake and then got out to begin unloading. As the driver walked around the truck, he saw the victim lying on the ground next to the truck bed on the passenger side. A 13-foot log with a diameter of 12-13 inches lay on the ground nearby him. This log had a noticeable knot in the middle which may have caused it to move into an unstable position on top of the load as the logs shifted during transport. Although the incident was unwitnessed, apparently the victim loosened the binder before the endloader driver was able to come over to secure the logs with the grapple and this unstable log rolled off the top and struck the victim in the head and face.

The sawmill manager, who is also a paramedic, ran over to the scene from the sawmill office. Even though the victim suffered severe head injuries, vital signs were detected. EMS personnel were dispatched after receiving the call for help at 6:15 a.m., arriving on the scene at 6:25. The victim was taken to a local hospital, but died that morning.

CAUSE OF DEATH

Cause of death on the coroner's report was cerebral hemorrhage due to fractured skull due to logging accident.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: The height of the stack of logs should not exceed the standards on the truck. (APA Safety Alert 93-S-46)

Discussion: In this case even though the logs were reportedly not stacked exceedingly high, the topmost logs on the rounded stack were slightly above the standards. Loads that are kept below the standards will ensure that logs cannot roll off during unloading even if the logs have shifted while in transit. In this case a knotted log on top of the stack had become unstable and subsequently rolled off the truck at the sawmill; however, if the load had been below the standards this log would have not been in a hazardous position.

Recommendation #2: Sawmill operators should enforce safe unloading procedures such as not releasing binders until a loader is able to secure the load of logs.

Discussion: Sawmill regulations for log unloading methods state that "binders on logs shall not be released prior to securing with unloading lines or other unloading device [CFR 1910.265 (d)(1)(i)(b)]. Although it was the usual practice at this sawmill to secure the logs with a grapple before the chains are released, in this case the victim apparently released the binder before the endloader was able to come over to the truck. Training should be provided by sawmill operators as well as employers concerning safe unloading procedures. Apparently the victim went with the driver to gain experience in the unloading process and may have needed further instruction on the usual practices at the sawmill and what hazards to be aware of during the process.

Recommendation #3: Loggers/truck drivers should ensure that binders/chains sufficiently secure the logs to avoid movement during transit.

Discussion: Sawmill regulations for lumber hauling trucks state that "...binders shall provide adequate means to secure the load against any movement during transit" [CFR 1910.265 (c) (30)(xii)(b)]. In this case, the logs on the truck trailer were secured with only one chain in the middle of the load which was the normal practice for this logging operation. When the binder that secures the chain was loosened, an unstable log on top of the load rolled off. In this case having another chain on the load may have decreased the shifting of the logs during transport as well as decreased the risk of a log falling off the truck unexpectedly.

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Recommendation #4: Sawmill owners should develop and enforce written safety policies that include proper procedures for unloading log trucks on the premises.

Discussion: Enforcing safe procedures and providing proper training would help ensure that log trucks are unloaded properly, providing a safe work environment for loggers, drivers, and the employees of the mill. In this case the victim was not an employee of the sawmill, however loggers and truck drivers who do business with the mill should be expected to follow the established procedures.

Recommendation #5: Loggers should attend the Master Logger Program to learn safe logging practices.

Discussion: Loggers should be aware of proper procedures and safety practices

to ensure a safe work environment. The 3-day Master Logger Program covers material concerning logging safety, appropriate personal protective equipment, and best management practices. For information about the Master Logger Program, contact Jeff Stringer at the University of Kentucky Department of Forestry (606/257-5994).

References

Timber Harvesting Safety. (1987) Washington, DC: American Pulpwood Association.

Occupational Safety and Health Standards for General Industry (29 CFR Part 1910). 1997. Chicago IL: CCH Incorporated.