

2 Caught in ditch witch – Inspection #1290603

A **61 year old male** employee was fatally injured when he was **caught in** the boring tip of a ditch witch while starting a horizontal bore under the road. On the day of the incident, the victim, a machine operator, had been dispatched to a customer's residence to install cable for telecommunications services. The installation project included boring underneath a two lane road in order to connect the cable to the servicing terminal. The victim was working alone. It was determined that the prep work which included, surveying the site, locating the utilities, and digging an approach trench had been completed by the victim. Also, approximately four, 10 foot long drill rods with drill bit had been connected to the ditch witch. Typically, machine operators add one drill rod at a time but the employee had four rods attached to start the bore. The company policy instructs machine operators to call for a helper on bores over 20 feet long (2 rods) but a call was not made for this 32 foot long bore project. The investigation revealed that the victim was using pliers to keep the drill control on the ditch witch in the forward position and approached the rotating drill bit for an unknown reason. Approximately 25 minutes after the victim started to bore, the customer noticed that the victim was lying on the ground approximately 5 foot from the ditch witch and was injured as a result of being caught in the drill string. Although it is unknown why the employee rigged the ditch witch control and approached the drill, evidence revealed that he approached the drill bit from the left side of trench, faced the machine, and bent over allowing his jacket to become entangled in the drill bit.

The employee was an experienced machine operator with 20 years of experience conducting bores. The investigation concluded that the victim did not call for help on a bore greater than 20 feet, did not dig an approach trench of adequate length, connected four drill rods prior to starting the bore, used pliers to override the safety feature of the ditch witch drill attachment controls, and approached the drill bit while the drill string was rotating.

The ditch witch manufacturer stated that 1-man bores can be conducted safely under certain circumstances; however, a helper is required when adding a rod to the drill string and when using the drill string guide. The company had developed policies and procedures based on the manufacturers recommendations; however, the policies and procedures were not concise and employees were not provided with consistent training as made evident by variations in work practices. The company had knowledge of machine operators performing 1-man bores over 20 feet long and adding rods to the drill string as a 1-man operation; however, did not enforce employee adherence to the policies and procedures regarding boring operations.

Citation(s) as Originally Issued

A complete inspection was conducted at the accident scene. Some of the items cited may not directly relate to the fatality.

Citation 1 Item 1

TCA 50-3-105(1)	Each employer did not furnish to each of its employees conditions of employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious injury or harm to its employees.
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In that employees were not effectively protected from caught-in hazards while performing 1-man boring operations. Feasible means of abatement for this hazard, among others, would be:

1. Develop a tracking system to ensure policies and procedures are enforced and discipline employees if procedures and/or policies are violated.
2. Provide Installation Technicians with additional training and tools to make better site assessments so that two Machine Operators should be assigned before the crew leaves to go to a job site that, according to policy, would require a helper.
3. Develop and implement a program that provides employees with clear, consistent training on bore policy and procedures especially with regards to 1-man vs. 2-man bore operations.



Photo 1 of 1 – View of the pedestal across the road, indicated by red arrow, and the approach trench filled in with dirt, indicated by blue arrow. View of the ditch witch used to dig the trench.