The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research

Truck Driver Electrocuted in North Carolina

FACE 87-37

Introduction:

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR) is currently conducting the Fatal Accident Circumstances and Epidemiology (FACE) Project, which is focusing primarily upon selected electrical-related and confined space-related fatalities. The purpose of the FACE program is to identify and rank factors that influence the risk of fatal injuries for selected employees.

On February 12, 1987, a truck driver was electrocuted when the bed of a dump truck he was operating contacted a 7200 volt power line. A path to ground was provided by the truck driver when he stepped out of the truck.

Contacts/Activities:

Officials of the Occupational Safety and Health Program for the State of North Carolina notified DSR concerning this fatality and requested technical assistance. This case has been included in the FACE Project; however, because the company was dissolved immediately after the incident no epidemiologic evaluation was conducted. A DSR safety specialist discussed the incident with the OSHA compliance officer. Photographs were provided by the owner of the power line.

Overview of Employer's Safety Program:

The victim was the only driver for a trucking firm that provided hauling services. The firm had no written safety policy or safety program and no safety training was provided to the driver. The State of North Carolina does not require truck drivers to operate a truck as a condition for licensing and does not require specialized training for truck drivers, but does require that drivers have a chauffeur's license.

Synopsis of Events:

On the day of the incident the driver was spreading gravel in the driveway of a private residence with an 18 wheel cab-over type tractor trailer with a 32 foot 8 inch long aluminum hydraulic lift bed. Several loads of gravel had been spread at this site throughout the day.

At dusk the driver informed the owner of the residence that he was about to spread the last load of the day since it was getting dark. The driver returned to the truck and raised the truck bed to dump the gravel. The driver then pulled the truck forward while at the same time lowering the bed. The bottom phase, which was 24 feet above ground, of a three-phase

7200 volt distribution system that ran perpendicular to the road caught under a tie-down railing that ran around the front and sides of the truck (see Figure 1). This contact energized the truck. The owner of the residence stated that the tires on the truck began to explode. It is assumed that the driver exited the cab of the truck to see what was wrong and as his foot touched the ground he provided a “path to ground” from the electrically energized truck and was electrocuted.

The victim was pronounced dead at the scene by the coroner.

Cause of Death:

The medical examiner ruled electrocution as the cause of death.

Recommendations/Discussion:

Recommendation #1: Employers should develop safe work procedures that address tasks performed by employees, identify safety hazards, and stress safety training.

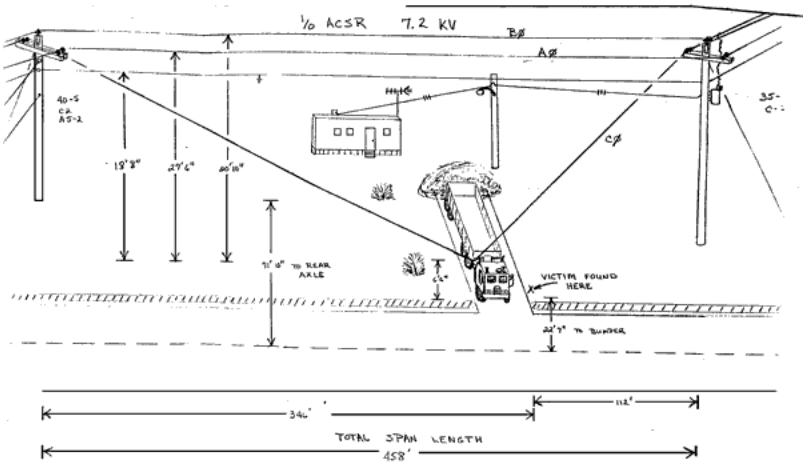
Discussion: The employer did not have established safe work procedures that were specific to the tasks performed by the driver, i.e., spreading gravel in residential areas. Procedures should be developed and implemented that detail the tasks to be performed and should identify the safety hazards associated with these tasks. The employer should assure that the safety procedures are followed.

Recommendation #2: Workers should perform a job site survey prior to the performance of a given task.

Discussion: Overhead power lines are an ever-present hazard in residential areas. NIOSH research indicates that one hundred thirty-five occupational fatalities occurred from 1980 to 1984 that were dumptruck related. Of these, approximately seven percent were electrocutions due to the bed of a dumptruck contacting overhead power lines (NIOSH unpublished data, 1987). Prior to the performance of a given task workers should perform a job site survey, which would identify any safety hazards present at a given job site. Workers would then be aware of the hazards they might encounter at a given job site. Additionally, in this instance the gravel was being dumped at dusk which would have made the power line very difficult if not impossible to see. If proper vision cannot be maintained by the driver in the truck someone should be posted outside the truck to be on the lookout for hazards.

Recommendation #3: Truck drivers should be required to operate a truck as a condition for licensing and should receive specialized training concerning the hazards associated with operating a truck.

Discussion: The State of North Carolina does not require truck drivers to receive any specialized training prior to driving tractor trailer trucks. A driver need only to apply for and receive a chauffeur’s license to be considered qualified to drive these vehicles. Prospective drivers should receive training in both the operation of and the hazards associated with the operation of tractor trailer trucks and should be required to demonstrate their proficiency in operating these vehicles before being issued a license.



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