



The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces  
through safety and health research



# 41-Year-Old Truck Driver Electrocuted in Kentucky

FACE 86-51

## 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 September 4, 1986, a 41-year-old truck driver was electrocuted while in the process of unloading concrete blocks. He was operating the controls for the truck-mounted crane boom at the time of the accident.

## Contacts/Activities:

Officials of the Occupational Safety and Health Program for the Commonwealth of Kentucky notified DSR concerning this fatality and requested technical assistance. This case has been included in the FACE Project. On September 11, 1986, a safety specialist met with the employer, conducted a site visit, interviewed comparison workers and a surrogate for the victim, photographed the accident site, met with the county coroner, and obtained a copy of the coroner's report.

## Overview of Employer's Safety Program:

The victim was employed by a company that manufactures precast concrete products (i.e., septic tanks and blocks). The company employs 19 full time people; seven truck drivers and 12 production and clerical personnel. The company has been in existence for 40 years and under the present ownership for 30 years. A safety program exists and a two week on-the-job training period is provided for new employees.

The victim worked as a truck driver delivering concrete products. This job involved driving a flat bed truck with a hydraulic crane mounted on the rear section of the bed to delivery sites and unloading the concrete products. The boom of the crane extends approximately 15 feet. The concrete products are unloaded with a metal fork type unloader attached to a steel cable and winch that is controlled through the crane. The concrete blocks are bundled in different quantities, depending on block size, and placed on wooden pallets to facilitate loading and unloading. The victim had approximately four years' experience with this employer and had made at least two other deliveries to the accident site.

## Synopsis of Events:

There is an eye witness to the accident, but the witness was unavailable at the time of the site visit. The accident scenario that follows was developed from interviews conducted with the electric utility engineer that investigated the accident, the owner of the block manufacturing company, the manager of the mobile home sales lot, and inspection of the accident site and truck used to deliver the blocks.

On September 4, 1986, the victim was to deliver an order of concrete blocks to a mobile home sales lot. The victim arrived at the lot and drove the truck to a three-sided, five foot high, wooden storage bin located at the rear of the mobile home sales lot. The storage bin, containing mobile home parts and supplies (i.e., concrete blocks, axles, tires, etc.) had been erected beneath an existing 7.2 kV powerline that is approximately 20 feet above the ground.

The victim then positioned the back of the truck in front of the open end of the storage bin. The victim was standing on the ground between the back of the truck and the opening for the storage bin operating the crane with a hand-held remote controller. One pallet of concrete blocks had been unloaded from the truck and placed on the ground inside and near the opening of the bin. A second pallet of blocks was to be placed on top of the first pallet. Unloading the second pallet required the operator to extend the boom in order to stack the pallets on top of each other. Apparently, the blocks being unloaded obstructed the driver's view and he extended the boom and contacted the powerline. Electrical current from the powerline travelled to ground through the remote hand-held controller and the body of the victim.

The power line had to be de-energized by the local electric utility company before emergency care could be administered to the victim, who was pronounced dead at the accident site.

## Cause of Death:

The coroner's report stated cause of death as electrocution. An autopsy was performed.

## Recommendations/Discussion:

**Recommendation #1: Employers should enforce existing regulations concerning crane operations in the vicinity of overhead powerlines.**

**Discussion:** Current OSHA standards 1926.550(a)(15) and 1910.180(J) of the Code of Federal Regulations require that the minimum clearance between electrical lines rated 50 kV or below and any part of the crane or load shall be ten feet, unless the electrical lines have been "de-energized and visibly grounded" at the point of work or physical contact between the lines, equipment, or machines is "prevented" by the erection of insulating barriers which cannot be part of the crane. The crane operator/delivery driver did not comply with these requirements.

**Recommendation #2: Employers should periodically conduct training concerning delivery site hazard awareness, including the hazards present around overhead powerlines.**

**Discussion:** The danger of overhead powerlines appears to be obvious; however, contact with powerlines and the subsequent occupational-related fatalities continue. Employers must stress and routinely review the hazards associated with overhead powerlines. Employers must also demonstrate that they are truly concerned about this aspect of job site safety and will not tolerate even one instance of unsafe conduct. In this case the storage bin was located directly beneath a 7.2 kV powerline. An evaluation of the site prior to unloading the blocks would have identified the hazards present and should have precluded the accident.

**Recommendation #3: Materials should be stored in areas that do not create additional job hazards.**

**Discussion:** A three-sided, five foot high wooden storage bin had been built directly beneath an existing 7.2 kV powerline. The crane operator/driver, in attempting to unload concrete blocks from the delivery truck into the storage bin, was exposed to an unnecessary hazard due to the storage bin's close proximity to the powerline. Materials should be stored so that

access to them does not subject the worker to unnecessary hazards (e.g., overhead powerlines).

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