



The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces  
through safety and health research / **NIOSH**

# 34-Year-Old Superintendent of Manufacturing Electrocuted in North Carolina

FACE 86-25

## 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 Sunday, April 27, 1986, a superintendent of manufacturing was electrocuted while attempting to reset electrical relays in an electrical control box.

## 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. On May 28-29, 1986, a safety specialist from the DSR research team met with employer representatives and health care providers, conducted a site visit, photographed the accident site, and interviewed comparison workers, witnesses, and family members.

## Overview of Employer's Safety Program:

The victim (34-year-old superintendent of manufacturing) had been employed for six years by a company that produces mulch fibers from wood chips. The 50-year-old company employs 31 workers – 24 in manufacturing, six in administration, and one salesman. The plant normally operates three shifts per day, five days a week. Because the plant was behind in production, management increased production time by 16 hours per week, raising production time from 120 to 136 hours per week.

The company was purchased by a conglomerate in August, 1985. Prior to this purchase the victim simultaneously performed the tasks of superintendent of manufacturing, plant manager, and manager of the facility. In December, 1985, the victim was relieved of his duties as manager of the facility and plant manager.

Recently the company contracted with noise specialists to conduct a noise survey in the plant and to determine compliance with occupational safety regulations. As a result of the noise survey, each worker is required to wear ear plugs. The safety program consists solely of this hearing protection program.

## Synopsis of Events:

On Sunday, April 27, 1986, the victim (a 34-year-old male, superintendent of manufacturing) was notified at home by workers and told that the 800 horsepower refiner motor at the plant would not start. This powerful refiner grinds wood chips into fibers. Thirty minutes later (at approximately 3:00 p.m.) the victim arrived at the plant. The victim met with the plant manager and shift foreman and discussed the electrical outage. The three men then began to search for the electrical failure in a control panel located on the exterior of the building. Not finding any problems with the control panel, the victim began checking a control panel box on the inside of the facility. This control panel box houses relays and circuitry for 110, 220, and 480 volt circuits and is located in a restricted room adjacent to the production area.

The victim opened the double metal doors of the control panel box (7'x3'x9') and began a visual check of the relays. The victim, while standing on a metal stool, visually checked the upper half of the panel box. As the victim checked the circuitry inside the panel box, the shift foreman assisting him held an amp meter and recited the meter readings. After several minutes of leaning into the dark control panel box the victim requested and received a flash light. A few seconds later the victim received an electric shock and asked for help. The foreman made two rescue attempts. In the first rescue attempt he was knocked backwards by an electric shock after he grabbed the victim around the waist. In the second attempt the foreman reached out, grabbed the victim by the belt, and pulled him to the concrete floor. The foreman could not find a pulse, but began CPR in an effort to revive the victim. The EMS arrived ten minutes later and transported the victim to a nearby hospital where he was pronounced dead.

Shortly after the accident the company investigative team found a detached 220 volt conductor in the panel box. Apparently the victim, while standing on the metal stool, was slightly off balance as he leaned into the dark control box. While attempting to maintain his balance, he supported himself against the inside of the control panel where his right hand made contact with the 220 volt conductor.

## Cause of Death:

The medical record at the hospital listed the cause of death as electrocution. The medical record noted entry wounds on the index finger of the right hand and exit wounds on his right medial wrist.

## Recommendations/Discussion:

**Recommendation #1: Employees should be given appropriate training commensurate with the tasks they are expected to perform.**

**Discussion:** The victim received no training in the maintenance of electrical systems. Although the victim had reset electric relays many times before without incident, he was neither trained nor qualified to repair electrical systems.

**Recommendation #2: The employer should develop and implement a comprehensive occupational safety program.**

**Discussion:** The company does not provide training in safe work procedures nor are there rules or written policies governing safe electrical repairs. None of the benefits that a safety program would provide (i.e., training, hazard identification, personal protective equipment, and safe operating procedures) were utilized. Once these procedures are developed the employer should assure that they are implemented and enforced.

[Return to In-house FACE reports](#)

Was this page helpful?

Yes

Partly

No