



The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces  
through safety and health research



# 27-Year-Old Painter Electrocuted in Georgia

FACE 87-32

## 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 July 21, 1986, a 27-year-old painter was electrocuted when the aluminum ladder he was moving contacted a 7200 volt power line.

## Contacts/Activities:

Officials of the Georgia Department of Human Resources notified DSR concerning this fatality and requested technical assistance. This case has been included in the FACE Project. On March 5, 1987, the DSR research team coordinator conducted a site visit, collected incident data, photographed the site, interviewed comparison workers and a surrogate for the victim, and discussed the incident with the Federal OSHA compliance officer and the employer representative.

## Overview of Employer's Safety Program:

The employer is a small painting contractor which employs 7 workers. The company has no written safety program. Safety training consists of only telling the workers to "be careful."

## Synopsis of Events:

On July 21, 1986, the victim was standing on a 24 foot, fully extended, aluminum extension ladder while painting a gutter on an apartment building. The gutter was located 18 feet above the ground and 8 feet 6 inches horizontally from a 7200 volt power line. The power line was parallel to the gutter and was 19 feet 6 inches above the ground. The victim was working alone at the time of the incident. The normal procedure for painting the gutter would be to paint a certain area of the gutter, then descend the ladder; move the ladder to a new location on the gutter; ascend the ladder; and continue painting.

It is assumed the victim was moving the ladder to another location on the gutter when the ladder came in contact with the 7200 volt line. The ladder and the body of the victim provided a path to ground and the victim was electrocuted. The victim had burns on both hands and the ladder was scorched 19 feet 6 inches from the end of the ladder that the victim was holding.

The victim fell (breaking contact with the energized conductor) and was found on the ground under the power line. Emergency medical service (EMS) personnel responded (time interval between incident occurring and arrival is unknown) and administered advance cardiac life support (ACLS) procedures. Attempts to resuscitate the victim were unsuccessful. The victim was pronounced dead on arrival at a nearby hospital.

## Cause of Death:

Cause of death was listed as electrocution.

## Recommendations/Discussion:

**Recommendation #1: Ladders used near energized power lines should be made of non-conductive materials.**

**Discussion:** OSHA Standard 1926.450(a)(11) states that “portable metal ladders shall not be used for electrical work or where they may contact electrical conductors.” The aluminum ladder used in this incident was conductive. If a ladder made of non-conductive material had been used in this case, the fatality might have been prevented.

**Recommendation #2: To assure proper protection for anyone working near the electrical power lines, arrangements should be made with the power company to de-energize the lines or at a minimum to cover the lines with insulating line hoses or blankets.**

**Discussion:** The power lines are located 8 feet 6 inches horizontally from the gutter on the building. Unfortunately, when a ladder is being used in this area, a safe distance from the power lines cannot be maintained. The power lines should have been de-energized or protected with insulating equipment.

**Recommendation #3: The employer should develop a safety program designed to recognize and correct hazards.**

**Discussion:** OSHA Standard 1926.21(b)(2) states that “the employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury.” The company does not provide training in safe work procedures and does not have any safety rules. The tasks performed by workers should be evaluated, hazards identified, and these hazards should be addressed by a safety program.

**Recommendation #4: Hazard awareness regarding overhead power lines should be stressed and routinely reviewed so that all employees working near overhead power lines are aware of these energized sources.**

**Discussion:** The danger of overhead power lines appears to be obvious; however, contact with power lines and the subsequent occupationally-related fatalities continue. Employers must stress and routinely review the hazards associated with overhead power lines. In this incident, it can be assumed the worker was not aware of the hazards associated with working near energized power lines.

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

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