



The National Institute for Occupational Safety and Health (NIOSH)

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

# National Guardsman Electrocuted in West Virginia

FACE 86-49

## 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 August 2, 1986, a National Guardsman was electrocuted when he climbed a tower supporting 46,000 volt transmission lines and contacted a jumper wire. The victim was a member of a special forces group that had been assigned to demolish the tower as part of a training exercise.

## Contacts/Activities:

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR) contacted the victim's unit and the power company. Both agreed to voluntarily participate as a part of the FACE program. This case has been included in the FACE Project. On August 25, 1986, the DSR research team (consisting of a supervisory safety engineer, an epidemiologist, and two safety specialists) conducted a site visit, met with a representative of the power company, and photographed the accident site. A telephone interview was conducted with the commander of the victim's unit. Comparison worker and next-of-kin interviews are scheduled for a later date.

## Overview of Employer's Safety Program:

The victim was a detachment commander in a 75-man company of National Guardsmen. The company has a full-time safety officer. Two days each month are set aside for National Guard training. Safety briefings are conducted by the safety officer prior to each training exercise.

## Synopsis of Events:

A regional power company requested the National Guard's assistance in demolishing a tower which supported electric power lines at an obsolete switch yard substation. This request was sent to the state headquarters of the National Guard. The Commander decided to honor this request because of the training aspects of the operation.

Two National Guard demolition experts accompanied a power company representative to the site where they photographed the site and made preliminary calculations of demolition requirements. At this time the power company representative told the two demolition experts that the power lines were energized and requested that a power company representative be present any time National Guard personnel visited the job site. The detachment that received the assignment was briefed by the two demolition experts that had conducted the original site visit. It was decided that the demolition work would be completed by the National Guard and that all electrical work would be completed by the power company.

Apparently, the detachment commander decided to visit the work site without permission from his superiors and without notifying the power company. The substation was located in a remote, wooded area. Access to the substation was provided by a dirt road that was almost impassible to automobile traffic. The commander and three detachment members decided to park their vehicle along the main road and to walk to the substation (approximately one and a half miles). Upon arrival at the site the detachment commander decided to climb the tower. As the detachment commander climbed the tower, his hand contacted a jumper wire on a 46,000 volt power line. He received what was to be a fatal shock and fell to the ground.

The victim was conscious and tried to walk to the road, but passed out repeatedly. He was then carried by his co-workers to the vehicle. The victim was transported to the hospital where he was later pronounced dead. Witness statements and National Guard reports indicate that members of the detachment were under the impression that the power lines on the tower were de-energized. There were no signs posted at the substation at the time of the incident to warn of the dangers present. Since the incident the power company has posted danger signs around the perimeter of the substation.

## Cause of Death:

Electrocution

## Recommendation/Discussion:

### **Recommendation #1: Workers should be made aware of all hazards at a work site prior to the beginning of any work.**

**Discussion:** When the National Guard decided to undertake this exercise two demolition experts visited the work site with a representative of the power company who briefed them on the status of the power lines in the area. A detachment was then assigned to carry out the demolition exercise. At this point members of the detachment involved with the demolition of the tower should have met with a power company representative and should have been made aware that the power lines were energized. Statements made by National Guardsmen reveal that the majority of the members were under the impression that all the power lines were de-energized, because the tower was obsolete. If these detachment members had been briefed by the power company, this misconception would have been avoided.

### **Recommendation #2: Employees should strictly adhere to outlined safe work procedures.**

**Discussion:** During the initial briefing between the power company and the National Guard the power company requested that a power company official be present at any time the National Guard visited the job site. Had this request been followed it is unlikely that this fatality would have occurred.

### **Recommendation #3: Readily climbable towers supporting energized power lines should be equipped with barriers to inhibit climbing by unqualified persons or posted with appropriate warning signs.**

**Discussion:** Section 280Alb of the National Electrical Safety Code states that "readily climbable supporting structures such as latticed poles or towers shall be equipped with barriers to inhibit climbing by unqualified persons or posted with appropriate warning signs." At the time of the incident the obsolete substation was not in compliance with this section. It was possible to climb any one of the legs supporting the tower and no warning signs were present on the tower. Since the incident, the power company has posted appropriate warning signs on the support legs of the tower.

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

Was this page helpful?

Yes

Partly

No