

TO: Director, National Institute for Occupational Safety and Health

FROM: California Fatality Assessment and Control Evaluation (FACE) Program

SUBJECT: Roofer electrocuted after falling on power lines in California.

SUMMARY

California FACE Report #92CA008

April 15, 1993

A 31-year-old white male roofer (victim) was electrocuted when he lost his balance and fell on top of two power lines while doing preparations for a roofing job. The victim was in the process of placing a chalk line under the power wires when the incident occurred. The location of the incident was a private residence. There were two co-workers on site at the time of the incident, but the victim was not removed from the electrical source and cardiopulmonary resuscitation was not attempted. The wire insulation had mostly worn off exposing the bare line wires. These wires (two live 110 volt and one ground) were tagged and retained by Department of Water & Power (DWP) for inspection. The California FACE investigator concluded that in order to prevent future similar occurrences, employers should:

- provide training and documentation to guard against electrical hazards for both themselves and their employees.
- have personnel trained in first aid and CPR.
- have electrical power lines deenergized when employees are going to be working in areas where they may be at risk with regard to electrical hazards.
- ensure that electrical service entrance conductors are insulated.

INTRODUCTION

On May 25, 1992, at approximately 11:00 am, a 31-year-old white male roofer was electrocuted when he lost his balance and fell on three electrical conductors/wires which provided electricity for the residence where he was working. The California FACE investigator was notified of the incident by the California Occupational Health & Safety Administration's (Cal/OSHA) office on May 26, 1992. He (investigator) went to the site on June 11, 1992 with a Cal/OSHA safety engineer to conduct an interview with the property owner and to take photographs. A copy of the Cal/OSHA report, the Coroner's Autopsy Report, and the police report were also obtained by the California FACE investigator.

The victim (employer) in this incident had been working at this location for approximately 3.5 days, having started the job on Thursday May 21, 1992. His employees had worked with him on several other roofing jobs at different locations. There were no records of the victim having a contractor's license. The owner of the property had a business card from the victim but was unaware of his qualifications for the job.

INVESTIGATION

The property owner had contracted with the victim in this incident to have his home re-roofed. The incident occurred on the fourth day of work. The victim was in the process of placing a chalk marker line at the east side of the roof, with a co-worker holding the loose end of the line. The victim reached an area of the roof where three electrical conductors/wires provided electrical service for the house. He (victim) then proceeded to reach under the wires with one hand attempting to pass the chalk line and metal case under the wires. While reaching over the wires to retrieve the case with his other hand he slipped and fell across the energized wires sustaining fatal injuries.

The co-workers did not try to remove the victim from the power lines. They both stated that they reported the incident to the homeowner and asked that 911 be called. They waited for the fire department to arrive before the victim was removed from the power lines. The fire department arrived at 11:10 am, and pronounced the victim dead at the scene.

The homeowner stated that he had contacted a DWP inspector several weeks prior to the incident and asked to have an inspector come out to his home to inspect

the powerlines on the roof. The DWP inspector came out and examined the power lines approximately two weeks before the incident occurred. The inspector informed the homeowner that he should contact the DWP after the roof was completed to have the wires replaced.

CAUSE OF DEATH

The Coroner's Autopsy Report stated the cause of death as electrocution due to contact with electrical power lines.

RECOMMENDATION/DISCUSSION

Recommendation #1: Employers should provide training and documentation to guard against electrical hazards for both themselves and their employees.

Discussion: Under Title 8 of the California Code of Regulations (CCRs) Article 3 Work Procedures section 2320.1 (b) employers must only permit qualified persons to perform any function in proximity to energized overhead conductors unless accidental contact has been suitably guarded against. In this incident the employer was the victim, thus it could be used as an example for other employers to learn by. Employers should not only enforce the CCRs for their employees, but they should also adhere to these regulations as well.

Recommendation #2: Employers should have personnel trained in First Aid and CPR.

Discussion: Under Title 8 of the CCRs section 3400 (b) have personnel trained in First Aid and CPR by a recognized organization such as the American Red Cross. The employees in this incident did not remove the victim from the electrical source. There were no First Aid/CPR measures taken until the paramedics arrived approximately 10 minutes after the incident occurred.

Recommendation #3: Employers should have electrical power lines deenergized when employees are going to be working in areas where they may be at risk with regard to electrical hazards.

Discussion: This incident could have been prevented if the power lines had been deenergized while the roofing crew was at work.

Recommendation #4: Employers should ensure that electrical service entrance conductors are insulated.

Discussion: The homeowner and DWP were aware that the wires needed to be insulated. A meeting before the roofing work began discussing this issue may have prevented this incident.

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April 15, 1993