

Rofer Dies After Falling 30 Feet From a Ladder When An Aluminum Pole Contacts an Overhead Power Line

December 1, 1993

SUMMARY

On August 18, 1993, a 36 year-old male roofer was fatally injured after falling 30 feet from an wooden ladder when the metal pole of a mop he was holding contacted a 3,600 volt overhead power line. The incident occurred while the victim was climbing up a ladder to the roof of a three story row house. As he was stepping off the ladder to the roof, the aluminum handle of the mop he was carrying contacted the power line, shocking him and causing him to fall to the ground. The victim died of his injuries the next day. NJDOH FACE investigators concluded that, in order to prevent similar incidents in the future, the following safety guidelines should be followed:

- *The employer should develop, implement, and enforce a comprehensive employee safety program.*
- *Employers should conduct a daily job hazard analysis with the participation of the workers.*
- *Employers should contact the local power company for assistance when working near overhead power lines.*

INTRODUCTION

On August 20, 1993, NJDOH FACE personnel were notified by an OSHA safety supervisor of a fatal work-related incident that occurred the previous day. On August 30, 1993, FACE investigators visited the site to interview a witness and photograph the scene. Additional information on the incident was obtained from the OSHA investigation file, the police report, and the medical examiners report.

The company was a small construction contractor that specialized in roofing and sheet metal work. The company employed five workers (including the owner) and had been in business since 1956. Except for on-the-job training, the company did not have a job or safety training program. The victim was a 36 year-old male roofer who was often considered the crew leader at the job sites when the owner was not present.

INVESTIGATION

The company had been contracted to install a new roof on a three story row house located in an urban area. The house was located near the center of a group of seven connected row houses and was accessible by the street on one side and a parking lot on the other side. A series of 3,600 volt overhead

power lines ran along the street parallel to the building, the nearest of which was approximately 24 to 30 inches away from the building and four to five feet above the edge of the roof. The job, which required laying three layers of tarpaper coated with melted hot asphalt to the flat roof, was anticipated to take five to six hours to complete.

The weather was overcast on the day of the incident. The crew arrived at the site at about 8:30 a.m. and started work. Placing their equipment on the street side of the building, they positioned a 40 foot, two section wooden extension ladder about seven feet away from the building. The ladder was equipped with a pulley wheel near the top rung which allowed them to hoist materials to the roof top with a rope. The crew spent the morning hoisting tarpaper and other materials to the roof until 10 a.m. when the company owner arrived with coffee for their coffee break. The owner looked over the job and then left the site.

After the break, the victim climbed the ladder while holding a roofing mop, a specialized mop used to spread melted asphalt on the roof. The mop consisted of a new, heavy nylon mophead attached to a six foot long aluminum pole. As the victim finished climbing the ladder and was moving on to the roof, the handle of the mop contacted the nearby 3,600 volt primary power line. A co-worker on the roof described seeing him shake for a few moments before he fell backwards off the ladder, falling 30 feet to a patch of hard ground below. A passing motorist saw the victim and called 911, and police and ambulance units were sent to the scene. The victim was taken to the hospital where he died of his injuries the next day.

CAUSE OF DEATH

The county medical examiner attributed the cause of death to multiple skull and rib fractures with contusions and lacerations of the brain and lungs resulting from a fall from a height after contacting electrical wires.

RECOMMENDATIONS AND DISCUSSION

Recommendation #1: The employer should develop, implement, and enforce a comprehensive employee safety program.

Discussion: In this case, the employees were apparently unaware of the hazard created by setting up the ladder near the overhead power lines. The ladder also had not been tied off at the top and lacked slip resistant feet at the bottom. In addition, the victim was carrying the heavy mop up the unstable ladder instead of using the hoist line, creating a fall hazard. To correct these problems, it is recommended that a comprehensive written safety program should be implemented by the employer. This program should include all aspects of the job, including (but not restricted to) working near power lines, ladder placement and use, fall protection, working with hot asphalt and fire safety.

Recommendation #2: Employers should conduct a daily job hazard analysis with the participation of the workers.

Discussion: In this case the workers set up the ladder near the powerlines, apparently unaware that there was a safer point of access on the opposite side of the building. To identify potential hazards, it is recommended that the employer and employees should conduct daily job hazard analysis of the work area before starting a job. This can be done while planning the day's work, and should include an examination of the work area for electrical and fall hazards, ladder placement, loose debris, and other physical hazards the workers may encounter. After identifying the hazards, the crew should be instructed on how to correct or avoid them. Conducting a job hazard analysis should be included in the employer's written safety program.

Recommendation #3: Employers should contact the local power company for assistance when working near overhead power lines.

Discussion: Overhead power lines are a common hazard in the roofing profession. When working near power lines can not be avoided (see recommendation #2), it is recommended that the company should contact the local power company for assistance. Some power companies may be able to de-energize or insulate the lines, and all power companies will give advice on working safely in the area.

ATTACHMENTS

Job Hazard Analysis. OSHA Publication 3071, US Department of Labor, Occupational Safety and Health Administration, Washington DC (1988).

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