

SUBJECT: Wheat Farm Employee Electrocuted When the Aluminum
Irrigation Pipe Contacted a 7200 Volt Power Line

FACE Investigation 90C0029

Introduction:

The Colorado Department of Health (CDH) in co-operation with The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), does Fatal Accident Circumstances and Epidemiology (FACE) investigations when a report of an occupational fatality is received. The goal of these investigations is to prevent fatal work injuries, in the future, by the study of: the working environment, the worker, the task the worker was performing, the tools the worker was using, and the roles of management in controlling how these factors interact.

On May 14, 1990, a 24 year old wheat farm employee was electrocuted when the aluminum irrigation pipe he was moving contacted a 7200 volt power line.

Contacts/Activities:

Under the terms of a cooperative agreement the Occupational Safety and Health Administration (OSHA), Area office, notified CDH of a work-related agricultural fatality. An investigator from CDH conducted a site visit, photographed the site, interviewed the employer and the individual who discovered the victim. Reports were obtained from the county sheriff and the coroner.

Overview of Employers Safety Program:

The employer has been in the farming business for six years. The farm employs one individual.

The employer did not have a written safety program or hazard communication program. The operation being done was a normal activity for the company and the victim.

Synopsis of events:

The fatal accident occurred on a Monday at approximately 1230 hours. The victim was relocating a siderow sprinkler system that is connected to the pumping system with 30 foot sections of 4 inch aluminum irrigation pipe. While relocating a section of the pipe the victim lifted it to a vertical position where it contacted a 7200 volt power line that runs along the edge of the field. The power line was 27 feet above ground level at the location. The current entered through the victim's right hand and exited from his left foot.

The victim was working alone at the time of the accident. The weather was clear and dry. The victim was discovered at approximately 1430 hours by farm workers from a neighboring farm.

Cause of Death:

The cause of death was determined by autopsy to be electrocution.

Recommendations/Discussions:

Recommendation #1: Personnel working with aluminum irrigation pipe located near overhead power lines should wear rubber insulated gloves.

Discussion: In this instance, the victim was wearing leather gloves and holding a rubber gasket in his left handle. There was no evidence of electrical burn to the left hand.

Recommendation #2: Employers should develop and implement comprehensive written safety programs. As part of this safety program, the employer should conduct regular training for all employees.

Discussion: This employer did not have a written comprehensive safety program. Even small companies should evaluate the tasks done by workers to identify all potential hazards. The employer should then develop and carry out a safety program addressing these hazards, provide worker training in safe work procedures and implement appropriate control measures.

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