

# CSI Country Wide Case Study Safety Strategy Discussion

## Construction Safety Investigator



### Instructions

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The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions should not be limited to the subject above and should pertain to the activities that workers will be involved in that may have the potential for safety related exposures.

### Case Day:

June 2, 2008

### Accident Type:

Power Transmission Accident - Electrocution

### Relevant laws, rules and codes may include:

29 CFR 1926.950(a)(1), 1926.950(b)(1), 1926.950(c)(1) thru (c)(1)(iii), 1926.950(d)(1) thru 1926.950(d)(2)(ii), Section 507 (a) of the American Public Power Association (APPA) Safety Manual for an Electric Utility, MIOSHA Construction Safety and Health Standard, Part 16, Power Transmission and Distribution Rule 1626(2)

### Case:

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A 47-year-old male journeyman lineman/foreman was electrocuted.

### Accident Detail:

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The journeyman lineman/foreman was installing a new 15 KV switch for a single phase, 7,200-volt overhead power line suspended from a wood pole. The decedent was working from an insulated aerial bucket. He had removed his lineman's gloves prior to removing the first lower bolt of the arrestor.

His coworkers believe the can arrestor tipped and the decedent attempted to catch it with his right hand. The current passed through his right hand, across his chest and exited his left hand, which was in contact with a second energized conductor. The decedent yelled to his ground man to lower the bucket. When the bucket was lowered, the decedent was still breathing but unconscious.

The ground man yelled to a two-person journeyman line crew working approximately 200 yards away to come over to help lift the decedent from the bucket. After taking the decedent out of the bucket, the crew began CPR while the ground man called his supervisor for assistance. Arriving 6 minutes later, the emergency response personnel took over medical care and then transported the worker to a local hospital where he was declared dead.

### Reconstructive Safety Evaluation:

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- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident from occurring?

## **Accident Scene Conclusion:**

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The investigation revealed this was the first time the decedent had worked on this particular pole. He had not de-energized the can arrestor fastened to the side of the transformer before working on it. The company owner stated that the electrical power should have been turned off because the home was not yet occupied. Therefore, the decedent may have assumed the line was de-energized. The decedent did not disconnect the stinger wire prior to working on the pole to install the 15 KV switch. It is assumed, that the can arrestor tipped over and the decedent instinctively might have grabbed the can arrestor (still energized) with his right hand.

## **Preventive Safety Measures Include:**

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- All operations are pre-planned using a Job Safety Task Analysis (JSTA) to ensure potential safety hazards associated with an operation are identified and appropriate steps are taken to eliminate or control them.
- Employers should ensure that linemen follow established safe work procedures to deenergize and ground and to verify the work area is de-energized through testing, prior to beginning maintenance and repair operations on power lines.
- Employers should ensure that linemen use all appropriate protective equipment, including insulated tools, before attempting any work on power lines with energized circuits.
- Employers should conduct both scheduled and unscheduled jobsite safety inspections on a regular basis.
- Employers should develop checklists of proper safety procedures and equipment for each job, which could be used to reinforce safe work practices.
- Employers should ensure communication devices are operational in all work locations or have alternate methods of communication developed.

## **Attendance Roster**

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**Reference:** This case was reported in the NIOSH Fatality Assessment and Control Evaluation (FACE) Program, Michigan Case Report: 08MI037.

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