

CSI Country Wide Case Study Safety Strategy Discussion

Construction Safety Investigator



Instructions

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:

February 2010

Accident Type:

Electrical Arc Flash Accident - Working On Energized Parts

Relevant laws, rules and codes may include:

29CFR 1926.20(a)(1), 1926.21(b)(2), 1926.400, 1926.403(b)(1)(i) - (vii), 1926.416, NFPA 70-E

Case:

An electrician received 1st, 2nd and 3rd degree burns resulting from an Arc flash.

Accident Detail:

An electrical crew was working at a plant facility. The crew was preparing to upgrade a plant metering system during a scheduled shutdown. Due to changes in the shutdown schedule, the time permitted to complete the upgrade, which consisted of installing several new meters and related hardware, was shortened.

As a result of the limited amount of time to complete the upgrades, rather than waiting until the system could be de-energized and locked out properly, the crew decided to facilitate the installation of the meters by preparing the meter housings with the electrical system remaining energized. This process involved mounting terminal and fuse blocks and precutting and fitting the required wiring, all without disrupting the energized system also located in these same housing cabinets.

One electrician on the crew was using a large aluminum torpedo level to first mark locations where holes would be drilled to hang new terminal and fuse blocks. While marking the holes, the employee accidentally touched the aluminum level to the still energized fuse block, located only a few inches from the one he was preparing to install.

As a result, an arc flash occurred, causing 1st, 2nd and 3rd degree burns to his hand, forearm and to his face.

Reconstructive Safety Evaluation:

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

