

Naval Facilities Engineering Command, Southeast

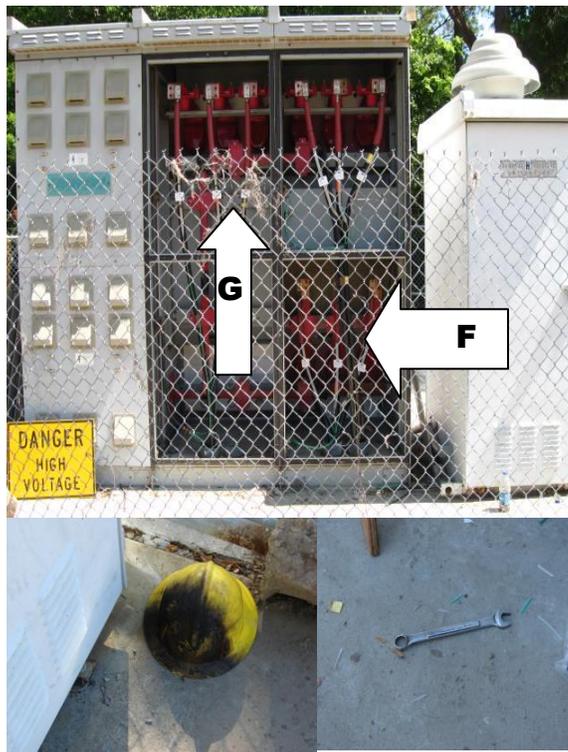
LESSONS LEARNED

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Accident Type: ELECTRICAL ARC FLASH BURNS
Injury: BURNS-HAND/FACE/CHEST
Damage: NOT APPLICABLE
Type of Work: ELECTRICAL
Equipment: 12,470 Volt(s) Sub Station Work

SUMMARY DESCRIPTION OF THE ACCIDENT:

- ◆ The contractor was installing new underground feeders into the switch substation. On April 16, 2008, the circuits (E) and (F) were re-energized for circuit phasing. On April 17, 2008, the victim and supervisor returned to the substation to finish labeling conductors and tightening the connection lug nuts. The supervisor issued the assignment to the victim the supervisor left the area and walked across the street to speak with another crew. The victim proceeded labeling the conductors on circuit (G) (was de-energized). When the supervisor returned, he observed that the covers had been removed from circuits (E) & (F) but said nothing to the victim about the other two circuits being energized. As the supervisor was walking away from the victim, the victim informed the supervisor that some of the lug nuts looked loose. The supervisor instructed the victim to go ahead and tighten the nuts. After the victim finished with circuit (G), he moved over to circuit (F). With a metal open/box end wrench in his hand, when the victim attempted to tighten the nuts in the circuit (F) cabinet, an arc flash occurred causing the circuit to go to ground through the wrench.



ISSUES:

- ◆ Prime contractor did not ensure subcontractors had an effective lockout/tag-out program
- ◆ Prime contractor did not ensure daily safety tours were being performed and documented
- ◆ Prime contractor did not ensure electrical subcontractor employees were testing circuits prior to the commencement of work on circuits.
- ◆ Prime contractor did not ensure the subcontractor had arc flash personal protective equipment available for employees testing circuits.
- ◆ Prime contractor was not having scheduled safety meetings and did not provide any training on lockout/tag-out safety to employees
- ◆ Prime contractor did not ensure that subcontractors retained qualification documents on file for employees performing electrical work
- ◆ Prime contractor did not ensure housekeeping was satisfactory in all work areas.
- ◆ Prime contractor did not adequately manage their contractual Mishap Prevention Program.
- ◆ The equipment that was isolated was not visibly grounded as required by the lock out tag out procedure.