

Case 465. 45-year-old electrical transformer technician died from complications following contact with a 4,800-volt energized wire/parts while reaching for a crescent wrench he had dropped in a buss duct.

A 45-year-old male electrical transformer technician died from complications following contact with a 4,800-volt energized wire/parts while reaching for a crescent wrench he had dropped in a buss duct. The buss duct was located below a transformer cabinet not associated with the work being performed. The decedent was a member of a 6-person crew which included two journeyman electricians and four technicians, one of whom was the decedent. The crew accessed the penthouse where the transformers were located by a scissor lift. The work crew was performing a transformer upgrade, changing out a 4,800 KV transformer that stepped voltage down to 480 VAC. They were replacing it with a 4800/13200KV which also stepped the voltage down to 480 VAC. The crew opened and turned off, but did not lock out, two main disconnects and tested for electrical supply in the two transition cabinets and the load points of the transformers before beginning removal. Two individuals, a journeyman electrician and a technician were building lugs and attaching them to the new transformer. The decedent needed a crescent wrench and went to get one. While returning to the transformer, he dropped the crescent wrench and apparently reached into the buss duct below the transformer to retrieve the wrench and contacted a live wire/equipment. He was later noticed laying on the ground by his coworkers who noticed his left hand in the buss duct and that he was "twitching". The coworker yelled to other coworkers for some wood, and he moved the decedent's hand and arm from the duct. The crew began CPR while waiting for emergency response. The decedent died approximately three weeks later from complications of the electrocution. It was determined that although the substation controls were in the off position and the employees tested the supply and load side of the transformers to be replaced there were additional lines in the duct and cabinets which were not tested and guarded to prevent accidental contact with energized parts.

MIOSHA General Industry Safety and Health Division issued the following Serious violation at the conclusion of its investigation.

SERIOUS: ELECTRIC POWER GENERATION, TRANSMISSION & DISTRIBUTION, [REF 408.18602], GI PART86, RULE 1910.269(u)(5)(ii): Except for fuse replacement or other necessary access by qualified persons, the guarding of energized parts within a compartment shall be maintained during operation and maintenance functions to prevent accidental contact with energized parts and to prevent tools or other equipment from being dropped on energized parts.

There was no guard installed against accidental contact for energized conductors within a buss duct compartment in a substation located at *incident location*, resulting in an employee being electrocuted while attempting to retrieve a wrench that was dropped and fell within the compartment, contacting the conductors on *incident date*. (MIFACE removed the location of the incident and the date of the incident.)