

**Case 235. 33-year-old male who performed heating, ventilation and air conditioning (HVAC) maintenance at a nursing home died due to contact with electricity as he was repairing a rooftop make-up air unit.**

A 33-year-old male who performed heating, ventilation and air conditioning (HVAC) maintenance at a nursing home died due to contact with electricity as he was repairing a rooftop make-up air unit. The decedent was instructed by his supervisor to troubleshoot the make-up air unit because it was not working properly. He was working by himself and was not using insulated tools or insulated work gloves. The decedent had removed the covers to the unit and motor belts and one motor lead wire. It appeared the decedent was testing the voltage of the wires on the motor when he came into contact with 480 volts of electricity. He was found the next morning by a coworker who was asked to let the decedent know his day's job tasks because the decedent did not attend the required morning meeting. The coworker looked for the coworker and then thought to look on the roof. The coworker found the decedent on the roof in front of the unit he had been working on, leaning backward with his body between two smaller air conditioning units with the voltage tester in his hand. The power switch to the unit was in the ON position when the responding police agency arrived. The decedent had received training by an outside firm as a Type I Type II EPA certification; this certification related to the handling of refrigerants, not electrical maintenance work.

MIOSHA General Industry Safety and Health Division issued the following Serious citations to the firm at the conclusion of its investigation:

**Serious:** PERSONAL PROTECTIVE EQUIPMENT, PART 33, RULE 3312(1)

Each affected employee did not use appropriate eye and/or face protection as prescribed in rule 3311 of Part 33 where a hazard existed due to flying objects or particles, harmful contacts, exposures, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, glare, injurious radiation, or electrical flash:

Employee not wearing eye or face protection while working near electricity, make up air unit – Roof

**Serious:** ELECTRICAL SAFETY-RELATED WORK PRACTICES, PART 40

- RULE 4002(2)

Employees in occupations that a higher than normal risk of electrical accident, as specified in Table 1 of Part 40, and other employees who also may reasonably be expected to face a comparable risk of injury due to electrical shock or other electrical hazards, were not trained:

Not trained, firm was unable to provide documentation showing that employee received any classroom training, or certification of electrical training

- RULE 4008(4):

An unqualified person was allowed to perform testing work on electric circuits or equipment:

Unqualified employee performing testing on electrical equipment, make up air unit- Roof

- RULE 4009(6)

When working near exposed, energized conductors or circuit parts, each employee did not use insulated tools or handling equipment when the tools or handling equipment might have made contact with the conductors or parts:

Employee not using insulated tools

- RULE 4009(1)

An employee who works in an area where there are recognized electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed. The appropriateness of the protective equipment shall be determined pursuant to the provisions of general industry safety standard, Part 33, Personal Protective Equipment, being R408 13301 et seq. of the Michigan Administrative Code.

No insulated gloves