

Electrical Safety: Shock, Arc Flash and Lock-out/Tag-out Fatality File



Worker Killed in Arc Flash and Blast at Eversource Energy Substation

Summary of Incident

On July 12, 2022, 31-year-old Fabio Pires, an Eversource Energy employee, was killed by an arc flash and blast while working on energized electrical equipment in Boston. The arc occurred when equipment was being set back into place during maintenance. Pires sustained fatal thermal and blast injuries on site.

Investigation

OSHA opened an inspection and proposed penalties totaling \$333,560 against Eversource Energy. Investigators found the company had not fully de-energized the equipment, had not followed the manufacturer's maintenance recommendations, and had failed to make a reasonable estimate of the heat energy (incident energy) to which workers would be exposed if an arc flash occurred. Citations were issued under federal electrical safe-work-practice and PPE standards.

Key Hazards Demonstrated by the Incident

The case reflects the three failures OSHA cites most often in arc flash fatalities. First, work was performed on equipment that should have been de-energized and locked out under 29 CFR 1910.147. Second, the employer did not perform an incident-energy analysis or specify arc-rated PPE matched to the hazard, in line with NFPA 70E. Third, manufacturer maintenance procedures were not followed during reassembly, allowing the fault that initiated the arc.

Takeaways

De-energize, lock out, tag out, and verify dead with a known-good meter before any maintenance task. Conduct an arc flash hazard assessment and define the incident energy and approach boundaries for the equipment. Wear the arc-rated PPE the task requires, every time. Follow manufacturer maintenance procedures exactly during reassembly and re-energization.

Sources: *Utilitydive.com*