KENTUCKY State FACE Program
Fatality Assessment & Control Evaluation™

REPORT#: 25KY055 REPORT DATE: 06/24/2026

**DATE:**
07/25/2025

**TIME:**
4:30 p.m.

**VICTIM:**
43-year-old white, non-Hispanic male

**INDUSTRY/NAICS CODE:**
Plumbing, Heating, and Air-Conditioning Contractors / 238220

**EMPLOYER:**
HVAC Contractor

**SAFETY & TRAINING:**
Formal Safety Program

**SCENE:**
Commercial Job Site

**LOCATION:**
Kentucky

**EMPLOYER SIZE:**
6

**EVENT TYPE:**
Electrocution

# HVAC Technician Fatally Electrocuted at Commercial Job Site

## SUMMARY

On July 25, 2025, a 43-year-old white, non-Hispanic heating, ventilation & air conditioning (HVAC) technician (victim) was attempting to install a new fan motor in a commercial HVAC unit. While doing so, the victim was electrocuted. The victim succumbed to the injuries he sustained.

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## CONTRIBUTING FACTORS

**Key contributing factors identified in this investigation include:**

- Performing maintenance on an energized HVAC system,
- No job hazard analysis process,
- Personal protective equipment not worn, and
- Working alone. Learn More>

## RECOMMENDATIONS

**Kentucky investigators concluded that, to help prevent similar occurrences, employers should:**

- Implement, train, and adhere to a formal energy control program, which includes lockout/tagout procedures,
- Implement a job hazard analysis process to determine appropriate measures to safeguard employees from the hazards associated with electrical shock,
- Require HVAC technicians to utilize personal protective equipment when electric shock hazards may be present, and
- Eliminate lone work when possible or manage associated hazards.

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## INTRODUCTION

On July 25, 2025, a 43-year-old white, non-Hispanic HVAC technician (victim) arrived at work at approximately 8:00 a.m. The victim was a tenured employee with more than 20 years of experience in the industry, 3.5 of which were with the company involved. The victims' typical work week was Monday through Friday, 8:00 a.m. to 5:00 p.m. Job tasks were assigned daily, on an as needed basis.

**Photo 1: Google Earth image of commercial job site where the incident occurred.**

The morning of the incident, the victim successfully completed several residential HVAC service calls prior to being dispatched to the commercial job site where the incident occurred. The task involved replacing a fan motor on a Daikin commercial HVAC unit. The jobsite, which was approximately two hours away from the company's corporate office, was a 500,000-square-foot structure that housed multiple business suites (photo 1).

According to telematics data located inside the victim's company-issued service truck, the victim arrived at the job site at 2:05 p.m., checked in with site personnel and proceeded to the roof of the building via internal access stairs. The victim worked alone, and no one from the business accompanied him to the roof.

At 4:30 p.m., two hours and 25 minutes after arriving at the job site, a facility maintenance worker not associated with the involved company went to the roof to inspect another HVAC unit that was not functioning properly. Upon reaching the roof, the maintenance worker observed the victim face down in front of the HVAC unit he had been repairing. The maintenance worker called 911 and rushed to the victim's aid. According to the coroner, the maintenance worker stated that he checked the circuit breaker prior to touching the victim and found it to be in the "on" position, meaning the HVAC unit was being repaired while energized. The maintenance worker de-energized the unit, placed the unresponsive victim on his back, and performed cardiopulmonary resuscitation. Emergency medical services arrived shortly after the call was placed and declared the victim deceased. The county coroner was contacted and at 4:50 p.m. confirmed the victim had succumbed to his injuries.

Because the victim worked alone, the incident had no witnesses. According to an investigation conducted by the coroner, the HVAC system was energized while the victim attempted to replace the fan motor. The official coroner's report states that the HVAC unit showed clear signs of being "mid-repair", with electrical wire "disturbed" (photos 5 & 6). During the repair process, the victim came in contact with an energized wire that carried 440 volts of electricity with his right hand, which resulted in the victim's fatal injuries.

## EMPLOYER

- The employer is a privately held HVAC contractor. The company was established in 2017 and consists of six total employees: one master-level HVAC technician, four journeyman-level HVAC technicians and one administrative specialist. The company primarily focuses on residential HVAC installations and repairs, which accounts for approximately 90% of their tasks. The other 10% is dedicated to commercial HVAC repair, gas line installation, and generator installation projects.

## WRITTEN SAFETY PROGRAMS and TRAINING

- The employer has a written injury and illness prevention program in place. The company informed investigators that the program contains and employees are trained on proper work attire, personal protection equipment (PPE), lockout/tagout procedures, job hazard analysis (JHA), and drug and alcohol policies.

- All technicians that work for the company are required to hold a state-issued HVAC journeyman license.
- Though not required by the company, the victim held an OSHA 10 certification, which includes topics such as introduction to OSHA, workers' rights and responsibilities, walking and working surfaces, emergency action plans, fire prevention and exit routes, electrical safety, PPE, hazard communication, and introduction to bloodborne pathogens.

## WORKER INFORMATION

- The victim was a 43-year-old white, non-Hispanic male. The decedent was a high school graduate and had worked for the employer for the last 3.5 years as an HVAC technician. The victim, who had more than 20 years of experience in the industry, held a state-issued HVAC journeyman license.
- Wage (response options to be circled/checked)
  - ☐ Hourly
  - ☒ Salary

## SUPPLEMENTAL DEMOGRAPHIC INFORMATION

- Preferred language
  - ☐ Interpretation services
- Race/ethnicity (response options to be circled/checked)
  - ☐ American Indian or Alaska Native
    *For example, Navajo Nation, Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, Native Village of Borrow Inupiat Traditional Government, Nome Eskimo Community, Aztec, Moya, etc.*
  - ☐ Black or African American
    *For example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*
  - ☐ Hispanic or Latino
    *For example, Mexican, Puerto Rican, Salvadoran, Cuban, Dominican, Guatemalan, etc.*
  - ☐ Middle Eastern or North African
    *For example, Lebanese, Iranian, Egyptian, Syrian, Iraqi, Israeli, etc.*
  - ☐ Native Hawaiian or Pacific Islander
    *For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, etc.*
  - ☒ White
    *For example, English, German, Irish, Italian, Polish, Scottish, etc.*
  - ☐ *Asian*
    *For example, Chinese, Asian Indian, Filipino, Vietnamese, Korean, Japanese, etc.*
  - ☐ Other

## EQUIPMENT

- The HVAC unit involved was manufactured by Daikin, model DCG1502104VXXXAB (photo 2). According to the manufacturer's website, the unit is no longer produced. Specifications are as follows:
  - ☐ 12.5-ton unit
  - ☐ 210,000 BTU
  - ☐ Electric unit
  - ☐ 460V
  - ☐ 1,340 pounds

**Photo 2. The Daikin commercial HVAC unit involved in the incident. Photo obtained via open records request.**

## INCIDENT SCENE

The incident occurred on the roof of a 500,000 square feet commercial retail building (photo 1). Formally, a shopping mall which was erected in 1988, the space was redeveloped into retail suites in the early 2000s. The roof where the incident occurred (photo 3) is a built-up roof, also commonly known as a "tar and gravel roof" or "hot tar and gravel roof". This roofing system consists of multiple alternating layers of asphalt (bitumen) and roofing felt, with the gravel embedded on the final top layer to protect the underlying materials from the

**Photo 3: Roof where the incident occurred. Red location marker identifies the HVAC system involved. Photo obtained via open records request.**

elements and prolong the roof's lifespan. The roof has several access points; the victim accessed the roof via an internal step system located inside the retail suite that requested the HVAC service (photo 4). Multiple HVAC systems that service the retail suites are present on the roof. According to the coroner's report, the HVAC unit that the victim had been working on showed signs of being "disturbed", indicating that the unit was in "mid-repair" (photos 5 & 6).

**Photo 4: Roof access point utilized by the victim. Photo obtained via open records request.**

**Photos 5 & 6: Loose wires described as "disturbed" per the coroner's report. The exact wire that delivered the electric shock is unknown. Photos obtained via open records request.**

## WEATHER

The weather on the day of the incident was approximately 92 degrees Fahrenheit, 50% humidity, with a 6-mph wind. The weather is not believed to have been a factor in this incident.[1]

## CAUSE OF DEATH

According to the death certificate, the cause of death was electric shock.

## CONTRIBUTING FACTORS

Workplace injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in injury or fatality. Kentucky investigators identified the following unrecognized hazards as key contributing factors in this incident:

- Performing maintenance on an energized HVAC system,
- No job hazard analysis process,
- Lack of personal protective equipment, and
- Working alone.

## RECOMMENDATIONS / DISCUSSION

***Recommendation #1: Employers should implement, train, and adhere to a formal energy control program, which includes lockout/tagout procedures.***

Discussion: OSHA standard 29 CFR 1910.333 sets forth requirements to protect employees working on electric circuits and equipment. This section requires workers to use safe work practices, including lockout and tagging procedures. These provisions apply when employees are exposed to electrical hazards while working on, near, or with conductors or systems that use electric energy.[2]

In this incident, an HVAC technician (victim) was working to install a fan motor on a commercial grade HVAC unit. The unit was energized while the work was being performed, according to the official coroner's report. The victim, in error, contacted a 440-volt energized wire, which resulted in his fatal injuries.

De-energizing electric hazards and utilizing a lockout/tagout program is beneficial in removing the risk of electrical shock in similar scenarios. Even if lockout is not possible, a tagging system can warn employees of electrical shock risk, helping the employee mitigate the exposure.

The lockout/tagout standard establishes the employer's responsibility to protect employees from hazardous energy sources. The standard gives each employer the flexibility to develop an energy control program suited to the needs of the particular jobsite. This is generally done by affixing the appropriate lockout or tagout devices to energy isolating devices and by de-energizing machines and equipment. The standard outlines the steps required to do this. Additionally, 29 CFR 1910.147 App A may be used as a guide by the employer to develop the minimum requirements necessary in which to develop procedures specific to the standard.[2]

Once the program is established, employees need to be trained to ensure that they know, understand, and follow the applicable provisions of the lockout/tagout procedure. The involved employer provided lockout tagout training, but the procedure was not followed or implemented at the job site. The training must cover at least three areas: aspects of the employer's energy control program, elements of the energy control procedure relevant to the employee's duties or assignment, and the various requirements of the OSHA standards related to lockout/tagout.[2]

To help prevent similar incidents, Kentucky FACE investigators suggest that employers implement, train, and adhere to a formal energy control program, which includes lockout/tagout procedures.

***Recommendation #2: Employers should implement a job hazard analysis process to determine appropriate measures to safeguard employees from the hazards associated with electrical shock.***

Discussion: Employers should perform job hazard analyses (JHAs) to identify potential hazards and establish effective prevention measures. A JHA examines the relationship between the worker, the task, the tools, and the work environment, helping to identify risks at each step before they lead to an incident.

It is particularly important to conduct a JHA for:

- New, unfamiliar, or jobs requiring loan work,
- Complex tasks,
- Jobs with high injury or illness rates,
- Tasks with the potential to cause serious or disabling harm, and
- Jobs where a single human error could result in a severe accident.

The insights gained from completing a JHA will allow employers to create and implement appropriate control measures and safe work procedures.

During a JHA, employers should ask key questions, such as:

- What can go wrong?
- What are the potential consequences?
- How might the hazard occur?
- Are there contributing factors?[3]

JHAs are ongoing processes. Once a JHA is complete, employers must provide training to workers on hazard recognition, how to avoid unsafe conditions, and how to follow safe work procedures. Training should emphasize that workers must never bypass safety equipment or processes, such as de-energizing equipment and lockout/tagout procedures, and should never risk injury to complete a task. JHAs should be reviewed regularly and updated as necessary to ensure continued effectiveness in hazard control.

To help prevent similar occurrences, Kentucky FACE investigators recommend that employers implement a JHA process to determine appropriate measures to safeguard employees from the hazards associated with electrical shock.

***Recommendation #3: Employers should require HVAC technicians to utilize personal protective equipment when electric shock hazards may be present.***

Discussion: Personal protective equipment (PPE) is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Personal protective equipment may include items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests, and full body suits.

In this incident, the victim was not utilizing any form of PPE to protect himself from the exposure of electric shock.

According to the hierarchy of controls (diagram 1), PPE is considered the “last line of defense” and should be provided to employees when engineering, work practice, and administrative controls are not feasible or do not

provide sufficient protection. Employers must provide PPE to their workers and ensure its proper use. Employers are also required to train each worker required to use PPE to know:

- When it is necessary,
- What kind is necessary,
- How to properly put it on, adjust it, wear it, and take it off,
- The limitations of the equipment, and
- Proper care, maintenance, useful life, and disposal of the equipment.[4]

PPE that could be helpful in preventing electrical shock include insulated gloves, rubber-soled or dielectric-rated footwear, and arc-rated or flame-resistant clothing. Other forms of insulative PPE may be appropriate, depending on the nature of the work and risk of exposure.

To help prevent similar occurrences, Kentucky FACE recommends that employers require HVAC technicians to utilize PPE when electric shock hazards may be present.

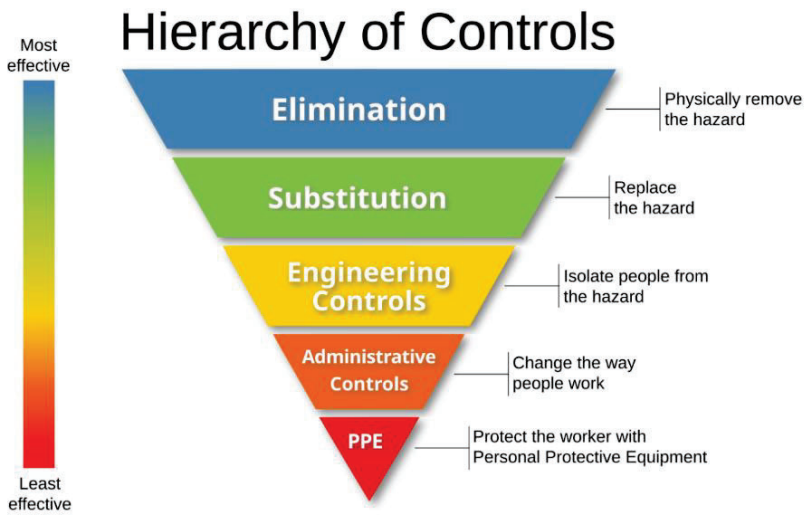


**Diagram 1: The hierarchy of controls. Hazard control methods at the top of the graphic are potentially more effective and protective than those at the bottom. Following this hierarchy normally leads to the implementation of inherently safer systems, where the risk of illness or injury has been substantially reduced.[5]**

***Recommendation #4: Employers should eliminate lone work when possible, or manage associated hazards.***

Discussion: Lone work occurs when an employee works alone or in an isolated area where he/she cannot be heard and/or seen by other employees. The victim in this incident was working on a rooftop HVAC unit while exposed to multiple hazards, including electrical energy, elevated work surfaces, power tools, heat stress, and the potential for unexpected equipment energization. While doing so, the victim was electrocuted. The victim was on the roof for approximately 2 hours and 25 minutes before his body was discovered, the exact time of the electrocution is unknown. Had a co-worker been present, the victim may have received medical attention more quickly. Although it's not known, quicker medical attention could have potentially altered the outcome.

This situation is an example of why employers should avoid lone work whenever possible, particularly when employees are exposed to serious injury or fatality hazards. Any of these hazards had the potential to cause a fatal incident. Having no coworker immediately available to disconnect power, initiate emergency response procedures, provide CPR, or direct emergency responders to the exact location introduces increased risk to employee safety. In electrical incidents, the first few minutes can be the difference between life and death. A worker who becomes incapacitated by electrical contact may be unable to call for help, and a delayed discovery can significantly reduce the likelihood of survival.

While not always the case, lone work could be an effort by the employer to maximize productivity and profitability of the company. While lone work in and of itself is not illegal in the United States, OSHA General Duty Clause requires employers to carefully consider, then address, any occupational safety hazard risks for employees working alone within fixed and mobile work sites.[6]

Having a second qualified employee should be considered critical risk control. When work involves isolated exposure to electrical hazards, lone work should be avoided whenever possible and prohibited when adequate risk controls cannot reduce the risk to an acceptable level.[6]

When lone work cannot be eliminated, employers should conduct formal risk assessments and implement a working alone safety program (WASP). A WASP could include elements such as scheduled check-ins, GPS monitoring, emergency response procedures, and enhanced supervision. However, the preferred approach should always be to eliminate lone work through proper planning, staffing, and operational design whenever feasible.[6]

To help prevent future similar incidents, Kentucky FACE recommends employers eliminate lone work when possible.

## REFERENCES


[1]Weather Underground. https://www.wunderground.com/history

[2]OSHA Fact Sheet. https://www.osha.gov/sites/default/files/publications/OSHAFS3529.pdf

[3]OHSA JHA. https://www.osha.gov/sites/default/files/publications/osha3071.pdf

[4]OSHA PPE. https://www.osha.gov/personal-protective-equipment

[5]NIOSH Hierarchy of Controls. https://www.cdc.gov/niosh/hierarchy-of-controls/about/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fniosh%2Ftopics%2Fhierarchy%2Fdefault.html

[6]High Risk, Lone Worker. https://www.assp.org/docs/default-source/psj-articles/f1_0718.pdf?sfvrsn=0


## INVESTIGATOR INFORMATION


This investigation was conducted by Beau Mosley, Fatality Investigator, Fatality Assessment and Control Evaluation, Kentucky Injury Prevention and Research Center, University of Kentucky College of Public Health.


## ACKNOWLEDGMENT


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