Arc Flash Hazards – NFPA 70E

The following statistics pertaining to electrocution and arc flash within the United States are alarming.

- Five to ten arc flash incidents occur each day.
- 350 fatalities each year are due to arc flash.
- The cost of burn injuries is estimated to be between $1 - $4 billion in medical expenses alone each year. This does not include the social costs that are also associated with these injuries.
- Electrocution is the fourth highest cause of industrial fatalities.

The fact is that most of these incidents could have been avoided. 80% of the fatalities occur when the power to equipment could have been turned off. It is for this reason that OSHA has started to look more closely at these concerns and referencing NFPA 70E when citing under the general duty clause. NFPA 70E is the Standard for Electrical Safety Requirements in the Workplace and addresses the best way to avoid injury or incidents by establishing an electrically safe work environment.

Under this Standard, employers are responsible for ensuring that the appropriate measures are taken to avoid these types of injuries to their employees. Responsibilities should include, but are not limited to:

- Ensuring that all electrical panels are labeled with the flash hazards that are present
- Ensuring appropriate personal protective equipment is utilized including flame retardant clothing, face shields, etc. when working on energized equipment
- Implementing an energized work permit procedure. All equipment should be considered energized until testing shows otherwise.
- Similar to a lockout/tagout program, all unqualified employees should be kept out of the affected space while work is being performed. Only trained employees who are aware of these requirements should be allowed to be in the area.

To determine the hazards present in your workplace, an analysis of the risk should be conducted as described in NFPA 70E. The selection of appropriate personal protective equipment should then be completed and required based on the tasks being performed.

Additional resources on the topics of arc flash and NFPA 70E can be found at the following websites.

http://www.nfpa.org