

**Marshall Municipal Utilities**  
**FLAME RESISTANT (FR) CLOTHING POLICY**  
Effective April 15, 2009  
Revised August 10, 2010

This policy shall apply to all MMU employees who are exposed to potential electric arc.

**WORK RULES**

When required, the minimum FR clothing and personal protective equipment (PPE) requirements are: FR pants and FR long sleeve shirt worn over cotton undergarments (short or long sleeve t-shirt and briefs/shorts), electrically-rated hard hat, eye protection, hearing protection, leather work shoes or boots, and leather gloves. FR shirts will be worn with the sleeves down and buttoned. FR coveralls or a long FR coat may be provided for intermittent use and may, with approval, meet the minimum clothing requirements described above. In all such cases, clothing and undergarments worn under the FR coverall or long coat must meet other requirements of this policy.

When working on an energized device with a recloser that can be turned off, the recloser must be turned off before work begins.

Affected employees (identified below in "FR Clothing Issuance") who are provided FR daily wear clothing are expected to wear FR jeans, leather shoes, and a 100% cotton t-shirt; and to have an FR shirt available when reporting to work.

FR clothing and PPE with an adequate arc rating will be worn in the following situations:

1. Any time a worker enters the bucket of a bucket truck (unless working on structures that involve no potential for exposure to energized electrical equipment or lines).
2. Any time a worker climbs a pole or ladder with the intent of working on or near energized aerial lines or equipment.
3. Any time energized padmount equipment is opened or when operating such equipment.
4. Any time a worker manually operates a breaker greater than 1000 volts (does not include fuse contactors and motor starters).
5. Any time a worker enters a substation or power station switchyard unless the worker has received training on substation safety to include minimum approach distances and arc flash boundaries specific to the substation to be entered or is accompanied by a supervisor in the Electric Distribution department; and whose activities there will not expose them to any potential electric arc.
6. Any time an electric meter is being installed or removed.
7. Any time a vault with energized cables is accessed.
8. Any time a worker performs 'hot stick' work.
9. Any time a worker performs work **on or near energized equipment**.
10. Any time work is performed where an arc hazard warning label indicates the need for FR clothing.
11. Any time a worker is exposed to an arc flash hazard that is not covered above.

**Communications Work Exception:** FR clothing is not required if **all** of the following conditions are met:

- A. The tasks to be performed are limited to communications work;
- B. No transformer, switch, or sectionalizer is affixed to the pole involved;
- C. The worker positions themselves below the level of the lowest electrical supply parts and outside the minimum approach distance;
- D. The worker maintains a distance from primary lines that exceeds the arc flash boundary as indicated by arc flash hazard analysis; AND
- E. No other potential arc flash hazard exists.

Minimum arc rating is determined by the arc flash hazard analysis. Additional PPE, such as rubber gloves or face shields, is required in some situations. The need for additional PPE should be indicated by signage, labels, or instruction.

Clothing made of synthetic materials such as acetate, nylon, polyester or rayon (either alone or in blends) may not be worn unless it has been adequately treated or is worn in such a manner as to eliminate the hazard.

When work is performed on or near exposed energized parts or equipment, employees will remove all exposed conductive articles such as key or watch chains, rings, or wrist watches or bands, if such articles increase the hazards associated with inadvertent contact with energized parts. Rings and wrist watches with metal case and watch bands shall not be worn while working on or near energized equipment or lines.

### **Substation Entry**

**Employees entering substations must notify the power plant Operator prior to entry and upon departure.**

### **FR CLOTHING ISSUANCE**

FR personal protective equipment will be made available by MMU either by direct purchase or through a rental or lease program maintained by MMU.

Additionally, FR daily wear clothing will be made available to individuals in the following positions (by department): **Electric Distribution** – Director, Assistant Director, Master Industrial Electrician, Line Foreman, Meter Technician/Lineman, Journey Lineman, Apprentice Lineman, and Electrician; **Underground Facilities** – Serviceperson; **Administrative Services** – Lead Fiber Optic Technician, Fiber Optic Technician.

MMU may provide FR daily wear by direct purchase, clothing allowance, or by a rental or lease program maintained by MMU. FR clothing provided by MMU through a clothing allowance is intended for use during the performance of work for MMU. Employees are responsible for the laundering, care, and replacement of all such FR clothing.

FR clothing purchased, rented, or leased by MMU shall be used only during the performance of work for MMU. Ownership for all such FR clothing remains with MMU or the entity providing rental or lease service, whichever is applicable. Upon separation of employment or transfer to a position that does not require FR clothing, the employee shall

return all such FR clothing to MMU unless the clothing was daily wear provided through clothing allowance and maintained by the employee.

Undergarments are the responsibility of the employee and shall be of 100% cotton material. Leather work shoes or boots are also the responsibility of the employee.

### **CARE AND MAINTENANCE OF FR CLOTHING**

FR clothing and PPE must be inspected before every use. Clothing or PPE that are damaged or contaminated with grease or oil shall not be used.

Follow the manufacturer's instructions for care and maintenance of FR clothing and PPE. Do not use bleach or hydrogen peroxide either separately or in detergents. Do not use softeners or starch. Avoid washing FR clothing with other clothes. Employees responsible for laundering FR daily wear clothing will be provided with manufacturer's laundering instructions.

Damaged FR clothing or PPE will be repaired or replaced as necessary. It is the responsibility of the employee who uses FR clothing or PPE to report damaged clothing or PPE to supervision.