www.visvolunteers.com

ELECTRICAL SAFETY – DEFECTIVE EQUIPMENT

Electrocution causes thousands of deaths, disabilities and injuries each year. Fires caused by electrical faults destroy homes, put organizations out of business, and throw people out of work. We depend on electrical power, but we need to understand how to protect ourselves and our operation when we use it.

If you touch a grounded surface and hazardous electrical equipment at the same time, the electricity from the equipment may flow through your body to the ground. It does not require high voltage to kill you or cause serious injury. The amount of the flow, the amperage that passes through the body, is what counts. It does not take much. For example, a six-watt light bulb used in a night light draws only 5/100th's of an ampere, but that is more than enough to kill.

How serious a shock is, or how much damage the electrical fault can cause, to some extent depends on how long the electric current flows, what part of your body receives the current or what kind of material is affected. Here is what an electric shock can do to you. It can:

- Stop your breathing
- Interrupt your heartbeat and stop your blood from circulating
- Paralyze nerve centers temporarily
- Burn nerves and muscle tissues
- Make you bleed internally

Other things that happen besides the direct effects of electricity:

- Arcing or heat from electricity may injure your eyes or set your clothes on fire. It may set fire to flammable or combustible materials nearby.
- Even a small electrical shock may startle you. That might make you fall or lose your balance, jump backwards into something hazardous, or spill what you are holding.

There are some simple steps everyone can take to help us prevent electrical fires, and to avoid injuries because of electrical faults:

2750 Killarney Drive, Suite 202, Woodbridge, VA 22192 p 800.222.8920 f 703.739.0761

Revised 02.27.2012 by VIS®

- If there ever is an electrical fault, so that a person is being shocked, equipment being damaged, or fire is started, the first thing to do is turn off the electrical power.

- That means we need quick access to electrical control panels – so do not let anyone store anything near them.

- Avoid touching any electrical equipment if you are touching any water or damp surfaces.

- Do not use equipment that causes any shock, appears to have any electrical problem, has any frayed or cut insulation on its wiring, or has damaged connectors.

- Report the damaged equipment so it can be repaired.

Look around your work area. Are equipment cords and extension cords in good repair and properly rated for the way they are intended to be used? Are electrical control panels and receptacle boxes covered, and are the covers closed?

Check equipment and machinery for hazardous conditions. Some things to look for:

- Frayed cords

- Broken insulation

- Cords poorly connected to body of equipment or to plugs

- Grounding pins broken off

- Motors that run too warm

- Visible wiring in poor condition

Avoid wearing good conductors of electricity, like rings, watches or chains.

- Do not touch the person if he or she is grounded. Shut off the electrical power first.

- Check the injured person for a heartbeat. If his or her heart has stopped, start cardiopulmonary resuscitation if you know how, and call others for help.

- If the person is not breathing, begin mouth-to-mouth resuscitation.

- Treat the person for shock. Keep them lying down. If the person is unconscious, put him or her on a side so that fluids can drain. Do not move the person if neck or spine injuries seem likely. Cover the person to maintain body heat.

- Make sure someone calls emergency medical services.