**Section 230.270 Modifications to NFPA 160**

NFPA 160, Flame Effects Before an Audience, is modified to include the following additional requirements:

a) Definitions for use in this Section:

"Armed" means confirmation of ignition source.

"Arming" means the key is in the on position, sending a signal to the FSU to light pilot for flame verification.

"Enable" means the system has power, safety valve open, accumulator charging/propane lines charging.

"ESSV" means Electronic Solenoid Safety Valve.

"FSU" means the Flame Safety Unit, a UL-Approved device to confirm an ignition source.

"Fuel tank" means the tank containing propane.

"Torch" means a gas flame effect no higher than 8" continuously burning, Group I effect.

b) The following are additions to the requirements of Chapter 7 (Use of Flame Effects):

1) There shall be a horizontal clearance of at least 10' between the effect and any overhead obstructions.

2) There shall be a horizontal clearance of at least 10' from any spotlight operator.

3) All temporary suspended truss components, whether supported from the ground or from a building's ceiling, shall have either a steel aircraft cable 3/8" galvanized wire rope safety backup protecting standard polyester spansets (polyester roundslings) or use GACflex™ wire rope soft sling to attach truss to the chain motor.

c) The following Sections of Chapter 9 (System Components, Flame Effects Control Systems, and Design) are deleted in their entirety and replaced as follows:

9.1.1. All flame effect control systems shall be designed and installed to prevent accidental firing and unintentional release of fuel. All firing systems must have at least one key safety interlock and that key should be with the Flame Operator when the unit is not in use.

9.3.2.2. The amount of fuels that are supplied to the flame effects shall be limited to that amount necessary for operation.

9.3.3. All flame effect control systems shall be manually and automatically enabled according to a prescribed sequence of operations outlined in the plan, which prepares the flame effect for subsequent arming and firing.

9.3.4. The arming of the effect shall be manually and automatically monitored and confirmed until the effect is fired.

d) The following are additions to the requirements of Chapter 9 (System Components, Flame Effects Control Systems, and Design):

1) The maximum fuel tank size allowed inside a building or facility is 20 lbs.

2) Hoses shall be located and protected to minimize exposure to physical damage or exposure to abnormally high temperatures, such as temperatures that might result from exposure to convection or radiation from heating equipment. Hoses shall be free from cuts or defects. Identified cuts or defects shall not be repaired. Defective or cut hoses shall be replaced. Hose that is exposed to moisture shall be constructed of noncorrosive materials or shall be protected against external corrosion.

3) The hose, at no time, shall extend through the audience or seating area.

4) The hose shall not extend from one room to another or pass through any partitions, walls, ceilings, or floors.

5) If more than one such cylinder is located in a room, the cylinders shall be separated by at least 20'.

6) All system components, including but not limited to hoses and connectors, shall be listed for their intended use and compatible with the products they contain.

7) Any accumulators or hose shall be purged of all fuel prior to removal from its location.

8) Appendices A and B of this Part are added to provide for the minimum layout of propane flame effect devices.

9) All flame effect displays allowed before an audience are limited to Group V or Group VI control systems.

e) The following are additions to the requirements of Chapter 11 (Fire Protection Provisions):

1) At least 4 pressurized water or pump extinguishers shall be readily available for use (with the manufacturer's instructions).

2) Prior to commencement of the live entertainment, an announcement to the patrons of the licensed premises must be made to inform the patrons of the locations of exits and fire escapes at the licensed premises.