Hot Work Definitions

**Brazing and Soldering** - Soldering and brazing uses molten metal to join two pieces of metal. The metal added during both processes has a melting point lower than that of the workpiece, so only the added metal is melted, not the workpiece. Brazing produces a stronger joint than does soldering, and often is used to join metals other than steel, such as brass. Brazing can also be used to apply coatings to parts to reduce wear and protect against corrosion.

**Combustible Materials** - Solid materials that are capable of burning and igniting.

**Cutting** - Any process, including grinding, which produces sparks capable of igniting combustible or flammable materials and transmits heat to the work material from a hot gas.

**Fire Watch** - At least one individual dedicated solely to extinguishing small spot fires and communicating an alarm.

**Flammable Compressed Gas** - Flammable compressed gases have dangers besides high pressure. These gases can easily catch fire and burn rapidly. These include acetylene, hydrogen, natural gas and propane.

**Flammable Materials** - Solid or liquid materials that are capable of igniting at a low temperature and continuing to burn.

**Grinding** - See the definition for Cutting.

**Hot Work** - Operations such as welding, cutting, burning, heating, grinding, or similar spark, slag, or intense heat producing activities that are capable of igniting combustible materials or flammable atmospheres or providing a source of ignition for a fire. Also defined as cutting and welding operations for construction/demolition activities that involve the use of portable gas or arc welding equipment, open flame or spark-producing apparatus.

**New Construction** - New work that is comprised of structural and mechanical work creating new buildings.

**Nonflammable Compressed Gas** - These types of gases do not catch fire easily or burn quickly, but will eventually burn and possess other dangers. The cylinder label and Material Safety Data Sheet (MSDS) will describe the toxic properties and physical hazards posed by specific nonflammable compressed gases. These include: ammonia, argon, carbon dioxide, nitrogen, oxygen, chlorine, and nitrous oxide. Symptoms of exposure include dizziness, unconsciousness, or suffocation under certain circumstances. They can also be harmful if inhaled, and can cause irritation to the eyes, nose, throat, and lungs.
Renovations and Remodels - New work that takes place in an existing building.

Shielding - Non-combustible welding drapes, used in hot work areas. Visible signs should be displayed on shielding while hot work is being performed.

Smoldering - A slow combustion of material without visible light and generally evidenced by smoke and an increase in temperature.

Soldering - Soldering uses metals with a melting point below 800 degrees Fahrenheit. Soldering is commonly used to join electrical, electronic, and other small metal parts.

Torch Operations - A plasma torch is used as an advanced tool for welding and cutting operations. Intense ultraviolet radiation, high noise levels, and gases are generated during this process.

Welding - Welding is the most common way of permanently joining metal parts. In this process, heat is applied to metal pieces, melting and fusing them to form a permanent bond. The following lists the most commonly