

## HAZARD ANALYSIS: SOLDERING STATIONS

**Description of Work:** Assembly, testing and repair of electronic circuits routinely involves the use of soldering stations. Soldering stations generally consist of a soldering iron, soldering iron holder, and a base unit. The soldering iron tip applies heat to liquefy raw solder. Liquefied solder "flows" onto and between non-solder-masked metallic areas of printed circuit boards and the metallic "legs" of components. When the soldering iron tip heat source is removed, the liquid solder solidifies and forms an electrically conductive bond between the printed circuit board and the component.

Step/Phase of Job	Safety Hazard	Precautions/Safety Procedures
Training	Inhaling fumes while soldering	Read solder MSDS. Be aware of the hazards mentioned therein. Use adequate ventilation while soldering.
Training :Handling Raw Solder	Ingesting Oxides of Lead	Read solder MSDS. Wash hands thoroughly with soap and water before eating, drinking or smoking after handling solder, to remove oxides of lead.
Training	Eyestrain	Read solder MSDS. Use adequate lighting and optical magnification gear (microscopes, magnifying head gear, or magnifying glass, etc....)
Training	Burn from Hot Tip	Training: Don't touch hot tips.
Operation	Burn from Hot Tip	Training: Don't touch hot tips.
Operation	Hot Tip becomes an incendiary device	ESE promotes situational safety awareness, which in this case means eliminating flammable clutter and any other flammable material in the work area prior to beginning the task. Elimination of combustible material eliminates the fire hazard. In addition, either a) Use Touch-Sensitive Soldering Stations such that the iron tip is not heated unless the iron is actually being touched, which normally means the iron is in somebody's hand. Since the tip is off and unheated when the iron is at rest in its holder, there is no inadvertent fire danger. or b) Use Manually operated Timers on the AC power lines sourcing the solder stations, to shut the irons off after a fixed period of time unless the timer is manually reset.

Accepted: \_\_\_\_\_  
 Supervisor/Task Manager

Date: \_\_\_\_\_