

CODE OF SAFE PRACTICES

WELDING INSPECTION

- 1) All employees exposed to welding and weld inspection work must be trained in the hazards and precautions necessary to conduct the work safely.
- 2) Electrical Hazards
 - stay clear of welding leads, particularly in wet conditions
 - inspect leads for frays and missing insulation, all leads must be insulated
 - do not touch or remove the ground lead, unless directed to do so by the welder
 - welding equipment should be shut off when not in use
- 3) Fumes and gases.
 - Welding operations create harmful fumes and gases, position yourself upwind and away from the welding to avoid exposure
 - Do not enter confined spaces where welding is being done, unless properly trained and equipped as required by Caltrans Safety Manual Chapter 14
 - Be aware that welding on galvanized or paint coated steel (particularly lead paint) produces toxic fumes and smoke, stay away from these operations unless properly trained and equipped with respiratory protection (See Caltrans Safety Manual Chapter 15)
- 4) Eye Hazards
 - Never look directly or indirectly at welding work, unless you are wearing a welding helmet or goggles with lenses properly shaded for the type of welding being done (generally a #14 shade is required for large electrodes). Be aware that reflected or indirect arc can also cause eye burns.
 - Welding operations should be isolated or shielded to prevent "flash" to adjacent workers or the traveling public.
 - Wear ANSI approved safety glasses on the job site to protect from flying particles.
- 5) Skin Protection
 - Stay clear of welding operations. Wear long sleeve shirts or coveralls to protect skin from ultraviolet rays generated from welding.
 - Be aware that metal parts may still be hot after welding is done. Wear gloves where appropriate.
- 6) Radiation
 - Weld inspection involves the use of radioactive sources, typically emitting gamma rays. These rays will penetrate clothing and skin, the best protection is to stay away. **Never touch or handle a radioactive source.** Contact the technician or inspection company immediately if you find a source out of its storage container or unattended.
 - The inspection technician must establish an exclusion zone around the work, with warning signs and tape, based on expected and measured radiation emissions. **Do not enter this area unless properly trained and equipped with a radiation detector badge.** The maximum allowable exposure is 2 millirem/hour, but exposures should be kept as low as possible.