**44:03:01:10.04.  Requirements of X ray film processing and darkroom.** Each installation using a radiographic X ray system and using radiographic film shall have available suitable equipment for handling and processing radiographic film in accordance with the following:

 (1)  Any manual processing tank shall be constructed of mechanically rigid corrosion resistant material. The temperature of solutions in a tank shall be maintained within the range of 60 to 80 degrees Fahrenheit, inclusive. Film shall be developed in accordance with the time‑temperature relationship recommended by the film manufacturer. A thermometer and timer shall be utilized to indicate the actual temperature of the developer and signal the passage of a preset time appropriate to the developing time required.

 (2)  Automatic processing of the film shall be in accordance with the time-temperature relationships recommended by the film and processor manufacturers. A control program to maintain the automatic processor operating parameters according to manufacturer's recommendations must be used;

 (3)  Film storage shall be provided and the film stored according to manufacturer's recommendations as to protection of radiation, heat, humidity, and storage position;

 (4)  Safelighting in the film processing-loading area shall be with the filter, bulb wattage, and distances recommended by the film manufacturer for film emulsion used by the facility. The safelighting shall prevent a pre-exposed film from increasing in density greater than 0.10 when exposed for two minutes with the safelights on;

 (5)  Pass boxes, if provided, shall be so constructed as to exclude light from the darkroom when cassettes are placed in or removed from the boxes, and shall incorporate adequate shielding from stray radiation to prevent exposure of undeveloped film.

 **Source:** 26 SDR 96, effective January 23, 2000.

 **General Authority:** SDCL 34-21-4.1, 34-21-15.

 **Law Implemented:** SDCL 34-21-4.1, 34-21-15.