



Ohio Administrative Code Rule 3701:1-48-19 Personnel monitoring.

Effective: April 17, 2022

(A) The licensee may not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm rate meter, and a personnel dosimeter. At permanent radiography installations where other appropriate alarming or warning devices are in routine use, the wearing of an alarming rate meter is not required.

(1) Pocket dosimeters must have a range from zero to two millisievert (two hundred millirem) and must be recharged at the start of each shift. Electronic personal dosimeters may only be used in place of ion-chamber pocket dosimeters.

(2) Each personnel dosimeter must be assigned to and worn by only one individual.

(3) Film badges must be replaced at least monthly and all other personnel dosimeters that require replacement must be replaced at least quarterly. All personnel dosimeters must be evaluated at least quarterly or promptly after replacement, whichever is more frequent.

(B) Direct reading dosimeters such as pocket dosimeters or electronic personal dosimeters, must be read and the exposures recorded at the beginning and end of each shift, and records must be maintained in accordance with paragraph (K) of rule 3701:1-48-23 of the Administrative Code.

(C) Pocket dosimeters, or electronic personal dosimeters, must be checked at periods not to exceed twelve months for correct response to radiation, and records must be maintained in accordance with paragraph (K) of rule 3701:1-48-23 of the Administrative Code. Acceptable dosimeters must read within plus or minus twenty per cent of the true radiation exposure.

(D) If an individual's pocket dosimeter is found to be off-scale, or if his or her electronic personal dosimeter reads greater than two millisievert (two hundred millirem), and the possibility of radiation exposure cannot be ruled out as the cause, the individual's personnel dosimeter that requires



processing must be sent for processing and evaluation within twenty-four hours. For personnel dosimeters that do not require processing, evaluation of the dosimeter must be started within twenty-four hours. In addition, the individual may not resume work associated with licensed material use until a determination of the individual's radiation exposure has been made. This determination must be made by the radiation safety officer or the radiation safety officer's designee. The results of this determination must be included in the records maintained in accordance with paragraph (K) of rule 3701:1-48-23 of the Administrative Code.

(E) If the personnel dosimeter that is required by paragraph (A) of this rule is lost or damaged, the worker shall cease work immediately until a replacement personnel dosimeter meeting the requirements in paragraph (A) of this rule is provided and the exposure is calculated for the time period from issuance to loss or damage of the personnel dosimeter. The results of the calculated exposure and the time period for which the personnel dosimeter was lost or damaged must be included in the records maintained in accordance with paragraph (K) of rule 3701:1-48-23 of the Administrative Code.

(F) Dosimetry reports must be retained in accordance with paragraph (K) of rule 3701:1-48-23 of the Administrative Code.

(G) Each alarm rate meter must:

- (1) Be checked to ensure that the alarm functions properly (sounds) before using at the start of each shift;
- (2) Be set to give an alarm signal at a preset dose rate of five millisievert (five hundred millirem) per hour; with an accuracy of plus or minus twenty per cent of the true radiation dose rate;
- (3) Require special means to change the preset alarm function; and
- (4) Be calibrated at periods not to exceed twelve months for correct response to radiation. The licensee shall maintain records of alarm rate meter calibrations in accordance with paragraph (K) of 3701:1-48-23 of the Administrative Code.