



Measurements of radiation dose received by occupationally exposed individuals provide information that may identify unexpected sources of high exposure and/or undesirable practices. They also indicate compliance with occupational dose limits (5,000 millirem per year) and provide documentation of annual and lifetime dose.

Personnel dosimeters shall be provided to all employees who are likely to exceed 500 millirem per year to the whole body (10% of the occupational dose limit) through occupational exposure. Occupational exposure does not include doses received from background radiation, from any medical procedure the individual may have received, or as a member of the public. Dosimeters are *recommended* for personnel whose radiation exposures are below the occupational limit and where there is very little potential for accidental exposure.

The dose limit applicable to pregnant workers is 50 millirem per month to the fetus once pregnancy is declared by the employee (500 millirem for the entire pregnancy). Personnel dosimeters shall be available for declared pregnant occupationally exposed personnel who are expected to exceed this limit. It is recommended that at least one dosimeter be worn outside any personal protective equipment (lead apron) at the waist level. Alternatively, two dosimeters may be worn: one outside the lead apron to determine employee dose and one at waist level under the lead apron to determine fetal dose.

The personnel dosimeter shall be worn between the chest and waist. It should not be kept in a pocket. Facilities that use handheld x-ray devices should consider providing ring dosimeters to employees to measure exposure to the hands.

Personnel dosimeters must be obtained from NVLAP-accredited laboratories to ensure accuracy and reproducibility. These laboratories distribute dosimeters on a monthly or quarterly basis and the facility returns them to the laboratory after the appropriate time period for readout and report. For facilities that have low radiographic workloads, greater accuracy and reduced cost can be achieved by replacing dosimeters at quarterly intervals. However, longer intervals may not allow timely detection of unexpected high exposures or undesirable practices.

Facilities that use personnel dosimeters shall review the reports with employees and maintain evidence of this review. If an employee requests a report of their personal exposure, the facility should provide this report within 30 days of the request. The facility should also provide this report to employees upon termination of employment or occupational exposure to radiation.