

X-Ray Shielding Review Procedure

Information for Qualified Experts

Updated!
June 2007

New!

- ❖ All facilities planning to install any x-ray machine capable of CT reconstruction having a typical ‘ring’ detector doughnut must submit a shielding plan (this includes mobile CT).
- ❖ Dental (iCat-type) cone beam pan/CT units do not need to go through plan review. We shall require that these units must be installed in an enclosed room (standard wallboard construction is adequate) with our standard patient viewing and exposure switch placement requirements. These units shall not be installed in open hallways.
- ❖ Cone beam CT units (not used for dental) must go through plan review.
- ❖ We are establishing minimum workloads for: rad room bucky (5pts/wk), rad room table (5pts/wk), and chiropractic (10 pts/wk).
- ❖ All mobile milli-ampereage capable c-arms that are used in one room only must have a plan review.

Don't forget the following:

Floor Plans:

- ❖ Provide a statement on the floor plan verifying that the control booth is at least 7.5 sq. ft. AFTER the generator has been installed.
- ❖ Provide a clear description of the areas outside the x-ray room on all four sides, above, and below.
- ❖ Provide a drawing scale (e.g. 1/4" = 1 foot).
- ❖ Differentiate between actual doors and doorways on floor plan,
- ❖ Provide an actual geographic footprint of the table (or CT gantry orientation) in the x-ray room, not an “X” where the center of the table or gantry is located.
- ❖ Show the location and width of chest bucky on floor plan.
- ❖ Indicate where the viewing window is positioned and indicate minimum size on floor plan.

Design Parameters:

- ❖ Declare use of NCRP 144, 147 or other references at the start of the plan.
- ❖ List all numerical factors associated with the plan and called for in NCRP 147.
- ❖ Please state if pre-shielding is used (NCRP 147).
- ❖ Direct radiography (DR) or computed radiography (CR) installs must be so identified.
- ❖ Medical and chiropractic CR and DR installs require the use of a “W(site)/W(norm)” modifying factor (NCRP 147; pg 39) to account for higher patient throughput (DR systems) and higher mAs requirements (CR systems).
- ❖ If any lead is required it shall be at least 2psf. This is meant to exclude the 1psf lead.
- ❖ All control booths/windows shall be shielded with 2psf lead at a minimum.

Paperwork:

- ❖ Pages of the plan shall be numbered as such: *Page 1 of 5, Page 2 of 5*, and so on.
- ❖ We accept plans ONLY from Washington state qualified experts.