

Shielding Plan Review FAQ

The New Hampshire Rules for the Control of Radiation (NHRCR) states:

He-P 4040.03 Shielding Plan Review.

(a) Prior to new construction or modification of existing installations utilizing ionizing radiation machines, a review of floor plans, shielding specifications, and equipment arrangements shall be completed ... to ensure that, once operational, no individual will receive a dose in excess of the limits prescribed in He-P 4020.

What is a Shielding Plan Review?

An evaluation performed by a qualified expert to determine if the design/construction of the walls/barriers of an x-ray facility provide shielding sufficient to prevent workers and individual members of the public from receiving doses in excess of New Hampshire Rules for the Control of Radiation (NHRCR) limits. The evaluation will consist of a review of floor plans, construction materials in the walls/barriers, and equipment arrangement, radiation output and amount of use.

After the x-ray machine installation or modification of existing installation, a radiation safety survey for radiation levels present is performed at the operator's position and at pertinent points outside the room in order to verify the adequacy of the shielding.

When is a Shielding Plan Review required?

Prior to new construction of an installation using radiation machines **or** modification of existing installations using radiation machines.

Situations where a shielding plan review may be required include the following:

- Installation of a new machine
- Replacement of an existing machine
- Repair or modification of a machine that affects machine output
- Relocation of a machine within a facility
- Renovations to an existing room that affect the barriers or moves the x-ray machine
- Construction of a new room or area within a facility where x-ray machine will be used
- Facility rooms or areas where mobile or portable machines are frequently used
- An increase in the actual use of the machine compared to the planned use assumed in an original shielding evaluation
- An increase in the occupancy of rooms adjacent to the x-ray room compared to the occupancy times assumed in an original shielding evaluation

Who can perform a Shielding Plan Review?

The shielding plan review must be performed by a qualified expert who is registered with the State of New Hampshire as a provider of shielding design services. [He-P 4040.03(b)]

Who can perform radiation safety survey measurements?

The radiation safety survey measurements taken after machine installation to verify adequacy of the shielding plan must be performed by a qualified expert who is registered with the State of New Hampshire as a provider of radiation safety surveys.

Where can I find a registered qualified expert?

A listing of qualified experts registered with the State of NH can be obtained by contacting the NH DHHS Radiological Health Section at 603-271-4588