Caution Signs

Rule .1623 of the regulations requires that unless otherwise authorized by the agency, the radiation symbol used on signs and for postings shall be designed as follows:

- The standard three blade and interior circle design shall be magenta, purple or black; and
- The background shall be yellow

The use of ANY other color combination without PRIOR written approval from the agency is in violation of this regulation. The background shall not be white or any other color intended to “blend” with the facility’s ergonomic plan. It is also not acceptable to switch the background and design colors such that the standard three blades and interior circle are yellow with a background of magenta, purple or black.

Posting

Rule .1624 of the regulations require that a the following areas, as defined in Rule .0104, shall be posted with a conspicuous sign or signs bearing the radiation symbols and the words:

- CAUTION
  RADIATION AREA
- CAUTION (OR DANGER)
  HIGH RADIATION AREA
- GRAVE DANGER
  VERY HIGH RADIATION AREA

It is permissible to post additional signs in Spanish as long as the exact translation is used. Alternate wording does not meet the requirement of the rule and is a violation. For example, CAUTION and DANGER may be used interchangeably for a HIGH RADIATION AREA but not for a RADIATION AREA. It is also not acceptable to use the symbol without the words and vice versa.

What is conspicuous? Something that is conspicuous should attract attention and be obvious to the eye. This means that EACH access point to one of the above mentioned areas shall have signs that meet the requirements of Rules .1623 and .1624 posted where they will catch the attention or eye of anyone entering the room from any angle. They do not have to be stuck in the middle of the door, but they must be otherwise conspicuous. The color requirements listed in Rule .1623 were selected to contribute to conspicuity. If the signs blend in with the environment, they cannot, by definition, be conspicuous.
Definitions

Rule .0104 defines the areas to be posted as follows:

- **(109)** "Radiation area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv) in one hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

- **(61)** "High radiation area" means an area, accessible to individuals, in which radiation levels from sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in one hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

- **(156)** "Very high radiation area" means an area, accessible to individuals, in which radiation levels from sources external to the body could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in one hour at one meter from a radiation source or from any surface that the radiation penetrates. At very high doses received at high dose rates, units of absorbed dose (e.g., rads and grays) are appropriate, rather than units of dose equivalent (e.g., rems and sieverts).

It is the **responsibility** of the facility to determine whether or not their facility meets the requirements for posting. The documentation of the basis for such decisions shall be made available to the inspector during the inspection. If an inspector suspects that an area might require posting, the facility should be prepared to defend its position for not posting.

Exemptions to Signs and Postings

Rule .0108 offers the following:

- The agency may, by license condition, registration condition, or order, when not in conflict with any law, waive any requirement in these Rules or impose additional requirements in accordance with 46 FR 7450 as it deems appropriate or necessary to minimize danger to public health, safety or property. Such additional requirements are subject to appeal procedures contained in Section 15A NCAC 1B .0200.

The first thing to note is the language. This is not a rule that states or implies than a waiver request shall be approved. It does clearly state, however, that in order for a waiver to be considered, the circumstances shall be such that the waiver is appropriate or necessary to minimize danger to public health, safety or property. It is the **responsibility** of the facility to make the determination that the implementation of a Rule, as codified, somehow presents increased danger to public health, safety or property. Cost and convenience are not acceptable reasons for a facility to be granted a waiver from a posting requirement. When submitting waiver requests, the facility should also provide the agency with a detailed alternate plan for dealing with the hazard.