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RECORD #66

TITLE: Guidance For Posting Radiation Area (Same As Record #36)

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Wigginton

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

November 19, 1984

IE INFORMATION NOTICE NO. 84-82: GUIDANCE FOR POSTING RADIATION AREAS

Addressees:

All nuclear power plant facilities holding an operating license (OL) or construction permit (CP) and research and test reactors.

Purpose:

This information notice is provided as notification of a potential problem relating to posting of radiation areas at nuclear power plants. NRC staff guidance specifically related to the unique nuclear power plant radiological working environment is provided. It is expected that recipients will review the information for applicability to their facilities and consider actions, if appropriate, to preclude a similar problem at their facilities. However, suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

Some power reactor licensees do not adequately post radiation areas in large buildings such as auxiliary buildings or reactor buildings. Some licensees have argued that posting only the entrances to buildings and large areas meets the literal 10 CFR 20.203(b) requirements for posting radiation areas. However, in many cases this posting practice may fail to properly inform the worker of radiological hazards in the work areas.

A "radiation area" is defined in 10 CFR 20.202(b)(2) as any area, accessible to personnel, in which radiation, originating in whole or in part within licensed material, exists at such levels that a major portion of the body could receive a dose greater than 5 millirem in 1 hour or greater than 100 millirem in 5 consecutive days. The provisions of 10 CFR 20.203(b) require that each radiation area be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION-RADIATION AREA.

Discussion:

In response to past requests for guidance from nuclear power reactor licensees concerning proper implementation of the posting requirements for radiation areas, the following NRC staff position was developed and transmitted to several power plant licensees. The intent of 10 CFR 20.203(b) is to alert

personnel to the presence of radiation and to aid them in minimizing exposures. The circumstances of each situation must be evaluated to ensure that posting practices do not detract from this intent by (1) desensitizing personnel through overposting or (2) failing to sufficiently alert personnel to the presence and location of radiation areas. Radiation area posting should warn individuals of specific radiological conditions in their immediate vicinity. It is counterproductive to post substantial areas which are not radiation areas. Since the regulations do not provide implementing details, such as whether a room or building containing a radiation area must be posted only at the entrance, or whether every discrete radiation area must be posted, the following should be used as guidance:

1. Posting only the entrances to a very large room or building is inappropriate if most of the area is not a radiation area and only discrete areas or individual rooms (cubicles) actually meet the criteria for a radiation area.
2. If discrete areas or rooms within a large area or building can be reasonably posted to alert individuals to radiation areas, these discrete areas or rooms should be posted individually.
3. Items (1) and (2) above are not mutually exclusive. Where much of a large area falls within the definition of a radiation area, but where smaller, discrete areas within that radiation area have radiation levels that are substantially above the general area levels, it may be appropriate and more informative to the workers to:
  - a. Post, as a radiation area, the entrances to the very large room or building.
  - b. Define (and alert workers to) discrete, smaller areas or rooms (within the larger, posted radiation area) in which the radiation exposure rates are substantially higher than the predominant exposure rates of the larger, posted area.

Good posting programs focus on making the worker aware of the radiological environment so that the worker can minimize his/her exposure. By using an appropriate combination of posting and periodic worker awareness training, licensees can aid workers in minimizing exposures.

No specific action or written response is required by this information notice. If you require any additional information about the matter, please contact the Regional Administrator of the appropriate regional office or this office.



Edward L. Jordan, Director  
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and Engineering Response  
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