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(57FR 56287)

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The Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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Attention: Docketing and Service Branch

Gentlemen:

SUBJECT: Proposed Regulations Concerning Certain
Generally Licensed Devices.

We offer the following comments on the proposed requirements concerning the accessible air gap of generally licensed devices (57FR 56287, published 11/27/92).

1. In the long accepted American National Standard N538, "Classification of Industrial Ionizing Radiation Gauging Devices", most measurement distances are from the nearest accessible surface of the source housing to the point of interest. Consistent with this practice and your guidance for NRC inspectors, we recommend that the 45 cm distance referred to in your proposal be not from the radiation source as proposed. We recommend that the proposed section 31.5 (b)(2) be revised to read, in substance:

"....radiation beam of the device at 45 cm (18 inches) from the radiation source housing or, if the radiation source is mounted external and adjacent to the vessel, from any inside vessel surface with the device shutter.....".

In addition to being consistent with ANSI N538, this change would

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help in determining compliance with the requirement. It would be difficult to determine, in the field, the exact location of the radiation source, rendering the measurement difficult if not impossible. The inside surface of the vessel is a readily available end point for the 45 cm (18 inch) distance measurement.

It may be noted that ANSI N538 has long been recognized by the NRC in Draft Regulatory Guide TP 102-5, "Safety Features of Gauges Containing Radioactive Material", and in Regulatory Guide 10.10, "Guide for the Preparation of Applications for Radiation Safety Evaluation and registration of Devices Containing Byproduct Material."

2. The proposed paragraph 31.5(b)(3), second provision, apparently assumes that the radiation source would be shielded in all directions except for a collimated beam which is directed at the detector. This assumption is not necessarily correct in all situations. For example, a radiation source could be contained in a "dip tube" which could be 40 cm from the vessel's nearest inner wall and the detector located at the nearest outer surface of the vessel. In this situation, the wording of the proposed rule would place no limit on the acceptable radiation level within the tank. If an individual (a) ignored caution signs at the entrance, and (b) ignored commonly followed procedures, the individual could receive unnecessary exposure.

We recommend that 31.5(b)(3) be revised to read, in substance:

"...the vessel is prohibited; or if foreseeable circumstances suggest an occasional infrequent entry by one or more individuals, then (i) each logical access point shall normally be secured, shall be posted with the radiation caution symbol and the statement 'Radiation

Area - Check to ensure that the shutter is closed before entering', and (ii) the radiation dose rate at 45 cm from any surface within the vessel, with the device shutter, if any, in the open position, shall not exceed 125 mRem/hr."

The requirement to provide a caution sign and statement at all logical access points has long been a condition of our Company's registration certificates. To the best of our knowledge, no generally licensed user of any Berthold manufactured gauge has ever been over-exposed.

The above suggested posting, together with a limit on radiation levels within the vessel to restrict exposures if the posting were ignored, would allow certain users to continue operations without incurring the expenses associated with converting to a specific license.

Also, a level of 125 millirem per hour at 45 cm will encourage manufacturers to use smaller sources and more sensitive detectors. This has always been the practice of Berthold.

3. The Statement of Considerations for the proposed rule invited comment on consistency between NRC regulations and Agreement State regulations.


As a nationwide distributor of gauges, we urge that the NRC and Agreement State regulations be exactly the same for devices used under general license. We aim to comply with all State and NRC regulations. Significant differences among the various sets of regulations would add to administrative costs and could necessitate more expensive custom installations in some jurisdictions.

Section 274 of the Atomic Energy Act of 1954, as amended, mentions the promotion of an orderly regulatory pattern between the Commission and State governments with respect to use and regulation of byproduct materials. Any inconsistency between NRC and State requirements for the distribution of gauges used under general license would seem to depart from an orderly pattern.

4. Our careful reading of the Statement of Considerations, Draft Regulatory Analysis dated Feb. 1992, and Draft Environmental Assessment dated Feb. 1992, did not uncover an indication that users of gauges under general license are now being overexposed. Accordingly, there does not appear to be a need for immediate implementation. Apparently, the proposed changes are based more on "good engineering judgement" than on a pressing health and safety problem.

If our above comments are adopted in the final rule, and in the absence of new and adverse experience, we believe that 3 years is a reasonable interval for distributors and users to come into compliance with the changes.

BERTHOLD SYSTEMS, INC.


G.M. (Bud) Smith, Jr.
President

cc: Richard Santorum, House of Representatives
Austin Murphy, House of Representatives
Ron Klink, House of Representatives