

United States Nuclear Regulatory Commission
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NRC CONSIDERS CHANGES TO REGULATIONS ON WATCHES AND CLOCKS CONTAINING RADIOACTIVE TRITIUM

The Nuclear Regulatory Commission is considering amending its regulations to simplify the licensing process for timepieces containing tritium. It would permit timepieces containing gaseous tritium to be licensed under the same regulatory requirements as those containing tritium paint.

The proposed revisions are in response to a petition for rulemaking submitted by mb-microtec, Inc, of North Tonawanda, New York.

Tritium, a self-luminescent radioactive material, is used in watches and clocks to make their hands, numbers or other parts visible in the dark. It may be either in the form of a gas--contained in tiny sealed tubes--or in paint. The planned revisions would not change the level of radiation protection provided to users and wearers of tritium-illuminated timepieces.

Currently timepieces containing tritium paint may be licensed under a section of the regulations that contains specific prototype testing requirements. License applications that meet those tests, and that do not exceed limits on the total amount of tritium permitted per timepiece, can meet NRC licensing requirements. However, some of the tests, such as a bending test designed to show that paint will not crack off, are probably not suitable for gaseous tritium. Therefore applicants for a license to manufacture watches and clocks containing gaseous tritium cannot apply under this section of the regulations and must apply for an NRC license under a separate section of the regulations that requires submittal of much more detailed information (such as engineering drawings containing the overall dimensions, minimum and maximum dimensions of each model or series, and description of construction materials).

The proposed rule would remove from the regulations the specific requirements for prototype testing but would continue to contain requirements for overall product performance. Where appropriate, the NRC staff, as part of its review of license applications, will impose testing requirements for watch hands and dials through license conditions for all timepieces containing tritium.

The NRC has concluded that the manufacture and initial distribution of products containing gaseous tritium light sources and the release of gaseous tritium in the event of breakage of the glass vial do not result in significant radiation exposures. In fact, these exposures are a small fraction of the average exposure from natural background radiation in the United States. Therefore, by adopting the proposed rule, the cost savings would be maximized without any measurable adverse effect on public health and safety.

Interested persons are invited to submit written comments on the proposed changes to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff, within 75 days after publication of a Federal Register notice. This notice is expected to be published shortly.

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