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NRC AMENDS REGULATIONS GOVERNING TIMEPIECES CONTAINING TRITIUM

The Nuclear Regulatory Commission is amending its regulations to simplify the licensing process for timepieces containing tritium. The amended regulations will permit timepieces containing Gaseous Tritium Light Sources (GTLS) to be licensed under the same regulatory requirements as timepieces containing tritium paint.

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

Tritium, a radioactive material, interacts with various radioluminescent materials incorporated in hands, numbers or other parts of timepieces to make the dials and hands visible in the dark. The tritium may be either in the form of a gas contained in tiny sealed tubes -- or in a luminescent paint. The amendments will not change the level of radiation protection provided to users and wearers of tritium-illuminated timepieces. In fact, the dose to the public from timepieces using GTLS is expected to be less than that from timepieces using the same quantity of tritium as paint, because the tritium leak rate from sealed glass tubes is significantly lower than from paint.

Under existing regulations, timepieces containing tritium paint may be licensed under a section of the regulations that contains specific prototype testing requirements. License applicants able to meet these prototype tests and whose products do not exceed the quantity limits per timepiece are able to meet the NRC licensing requirements. Some of these prototype tests, however, are not suitable for testing GTLS timepieces, so that applicants for a license to manufacture timepieces containing gaseous tritium cannot apply under this section of the NRC regulations. They must now apply for a license under a separate section of the regulations that requires submittal of much additional information, such as detailed drawings, dimensions, and materials of construction for each model or series.

The revised regulations remove the specific requirements for prototype testing from the regulations but do not change the intent of the existing product performance standard. Specific tests applicable to timepieces containing either tritium paint or gaseous tritium light sources will be incorporated in an NRC document for license applications for distribution of such products. The document, "Standard Review Plan for Applications for Licenses to Distribute Byproduct Material to Persons Exempt from the Requirements for an NRC License," (NUREG-1562) will be issued for use by the

effective date of the rule. The effective date will be 60 days after publication of a Federal Register notice on this subject, expected shortly.

This amendment simplifies the licensing process for timepieces containing GTLS, facilitates the use of a new technology in self-illuminated timepieces, and results in significant savings to licensees and to the NRC.

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