



Setting Standards for Excellence

**National Electrical Manufacturers Association**

1300 North 17<sup>th</sup> Street, Suite 1847

Rosslyn, VA 22209

703-841-3249

Fax: 703-841-3349

[Ric.Erdheim@nema.org](mailto:Ric.Erdheim@nema.org)

July 19, 2002

Dockets Unit  
U.S. Department of Transportation  
Room PL 401  
400 Seventh St. SW  
Washington, DC 20590-0001

Ref: Docket No. RSPA-99-6283 (HM-230)

Dear Sir/Madam:

The National Electrical Manufacturers Association (NEMA) represents manufacturers of lighting products. This letter addresses NEMA lamp manufacturer concerns regarding the proposed change to 49 CFR 173.424 and the burden that will be imposed upon the manufacturers/importers and distributors of consumer products, such as lamps that contain small quantities of radioactive material, if it is adopted as contained in the above referenced docket. These comments also address the potential consumer confusion and/or concern that could be caused by the new requirement. Specifically, the proposed change would modify §173.424(e) to require the marking, as "radioactive", of each instrument or article shipped in an excepted package, except for radio-luminescent timepieces.

As is the case with radioactive luminescent timepieces, lighting products, such as lamps, glow-switches or glow bottles that contain small quantities of radioactive material necessary for their operation, are manufactured or imported under either a USNRC or Agreement State radioactive materials possession license and distributed (sold) to the general public under a USNRC exempt distribution "E" license. In order for a product to be licensed for exempt distribution, the manufacturer/importer or distributor must satisfy the USNRC that it has been manufactured and prototype-tested according to specified standards and that the product meets specified radiation limits, where applicable. In addition, the manufacturer must develop routine quality control testing and production lot sampling procedures to the satisfaction of the agency. According to USNRC regulations, a product licensed for exempt distribution may be used and in most cases disposed of by the consumer without regard to its radioactive content.

Certain other consumer products will also be affected by the above discussed rule change, such as lamps that contain small quantities of thorium. For example, high intensity discharge (HID) lamps contain thorium that is crucial to their operation. Since the late 1940's these items have been exempt from USNRC regulations as containing "unimportant quantities" of thorium, if the content per lamp is less than the specified amount. As with the above described lamps with byproduct material, these lamps with "unimportant quantities of thorium may be distributed to consumers for use and disposal without regard to their radioactive content.

To require an USNRC-exempt lighting product to be marked as radioactive is burdensome for the following reasons:

- ✎ "E" licensed lighting products have already been evaluated and licensed for distribution with any marking approved by the USNRC. During the licensing process the manufacturer/importer or distributor has input with the agency as to the marking (if any), based on product size, design or the packaging to be used. In most instances the individual item package, rather than the item itself, is marked with information about the radioactive content. The new requirement of §173.424(e) would either supercede or be in addition to the USNRC approved product marking.

- ✍ Lamps containing thorium in quantities less than stipulated have been determined by the USNRC to be totally exempt from regulation due solely to the nature and quantity of radioactive material contained therein. There is no requirement for lamp or package labeling of any kind. The new marking requirement of §173.424(e) would impose product marking on a large and decades old segment of the HID market even though the NRC has found such labeling to be unnecessary.
- ✍ §173.424(e) would require the product itself to be marked, regardless of size or design, which in some cases could make a readable "radioactive" marking virtually impossible, (e.g., glow switches are sealed glass tubes that measure approximately 20mm long by 9mm in diameter). Individual product marking would entail modifications to production line equipment and possibly even the redesign of certain equipment to accommodate the marking of small components.
- ✍ Marking a lighting product as radioactive would send a mixed message to the consumer, as would be the same marking of a radioactive luminescent timepiece. The USNRC has determined that such a product is safe to use without regard to its contained radioactivity and yet §173.424 (e), if enacted as currently written, would require the product to be marked, in the manner of a warning, that it is "*radioactive*" — a marking the USNRC has not deemed necessary.
- ✍ Both fluorescent and HID lamps are typically three to four times more energy efficient than incandescent lamps. Through their Green Lights, Energy Star Buildings, Rebuild America and Federal Energy Management programs, the US EPA and the Department of Energy actively promote the conversion to more energy efficient lighting. The use of energy efficient lighting reduces the amount of coal, oil and gas burned in power plants, as well as the amount of air pollutants including greenhouse gasses released from power plants. A requirement to label these products as radioactive is likely to discourage the use of these environmentally preferable products.

There are many non-consumer-product instruments or articles that, because of the nature and/or quantity of radioactive material involved, should be marked radioactive for the safety of transport personnel who might have to handle an unpackaged device. However, that does not apply to USNRC-exempt products that can be distributed to consumers and handled as necessary by them without concern. Therefore, to alleviate the burden described above, the following change to HM-230 is proposed:

- ☒ §473.424(e) should be modified to change the wording of the instrument or article marking exception to: "... (except any device either distributed under a USNRC Exempt Distribution License, pursuant 10 CFR 32.14 or exempt from USNRC regulation pursuant to 10 CFR 40.13)..." This modification would cover radioactive luminescent timepieces and electron tubes, such as lighting products and others. An alternative might be to specify each such item, but some deserving of the exception might be missed and new items would require a modification of the subsection. The proposal would be a simpler way of dealing with the matter.

The precedent already exists in USDOT Hazardous Material Regulations for deferring to another agency's regulations regarding certain types of packaging (e.g., §173.427 (d)). This proposal, if adopted, would eliminate needless concern on the part of consumers as to the safety of a product deemed to be safe for use and disposal by the lead federal agency in such matters. It would also eliminate the extra expense and, in some cases, difficulty on the part of the manufacturers/distributors in complying with the product marking requirement. To treat the above described relatively innocuous consumer products the same as, for example, soil density/moisture gauges appears to be an example of over regulation.

Dockets Unit  
U.S. Department of Transportation  
Ref: RSPA-99-6283 (HM-230)  
July 19, 2002  
Page 3

If there are any questions on the above or if I can provide additional information, please let know.

Sincerely Yours,

A handwritten signature in black ink, appearing to read "Ric Erdheim". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Ric Erdheim  
Senior Manager