

March 26, 2010

**SUBMITTED VIA [www.Regulations.gov](http://www.Regulations.gov)**

**Secretary**

**U.S. Nuclear Regulatory Commission**

**Washington D.C. 20555**

**Attention: Docket ID NRC-2009-0547, (Federal Register Volume 75, Number 7, January 12, 2010)**

**Re: Eli Lilly and Company Response to Docket NRC-2009-0547**

Eli Lilly and Company ("Lilly") appreciates the opportunity to respond to the Petition for Rulemaking filed by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) in regards to labeling and accountability of tritium exit signs. As a possessor of over 2000 tritium exit signs, Lilly has significant experience complying with 10 CFR Part 31 requirements. We are in agreement with ASTSWMO that change to current regulations/guidance pertaining to tritium exit signs is needed to improve the labeling and accountability of these devices.

However, Lilly does not agree that advancement in photo-luminescent and LED technologies allows for wholesale replacement of tritium exit signs. Lilly believes tritium exit signs are superior to photoluminescent devices from the standpoint of reliability. While photo-luminescent signs do not require a constant source of electricity, they do require a threshold amount of ambient light to maintain an adequate "charge." In our experience, this limitation is not well understood and creates a risk of suboptimal performance where electricity has been off for the evening or where the sign is installed in a poorly lit area and not reliably charged. Both OSHA (29 CFR 1910.37(b)(6)) and International Building Codes (International Building Code, 2006 section 1011.5.3) require 5 foot candle illumination on the face of non self-luminous signs. While office spaces commonly have as much as 50 foot candles of ambient light, it is our experience that the peripheral spaces where exit signs are installed frequently do not meet the 5

foot candle threshold. Thus, the risk associated with installing photo-luminescent signs in areas with inadequate lighting is too high.

While Light Emitting Diode technology is compelling from an energy savings standpoint, energy consumption is not the only cost to LED technology. One must also consider the cost of wiring the sign location. Routing electrical lines to a new sign location, particularly in existing construction can cost more than a new sign itself. For these reasons and the previously stated reliability concerns with photoluminescent technology, Lilly strongly supports the continued use and availability of tritium exit signs.

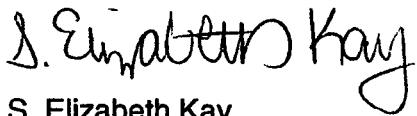
We agree with the petitioner that communication of General Licensing requirements between manufacturers and general licensees is not effective and thus compromises compliance. We also agree that expiration dates are not well marked on tritium exit signs, which can lead to prolonged use and inadequate functionality in the case of an emergency. Larger expiration labels would seem like a reasonable preventative measure for this problem, as well as communication from tritium sign manufacturers when their records indicate installed signs are close to expiration. Furthermore, the term "Expiration" can be misinterpreted to mean a sign no longer contains radioactivity in amounts requiring controlled disposal. The requirement for controlled disposal even after expiration should be clearly marked on the sign.

Lilly is also concerned about the lack of standardization and poor durability of serial number labels on tritium exit signs. It has been our experience that serial numbers are occasionally handwritten and may not be legible for the entire lifetime of a sign, particularly under building conditions predisposing selection of tritium signs, (such as facilities with no electricity or environmental controls.) It has also been our experience that manufacturer assigned serial numbers are not always unique or may be placed on multiple sign components and inadvertently switched during installation. The regulatory consequences of a single lost device or inventory discrepancy warrant improved serial number standardization, placement and durability by the manufacturer. Moreover, general licensees should be granted access to their NRC inventory records, as this inventory is primarily populated by manufacturer sales records and general licensees should be given the opportunity to proactively correct discrepancies.

Lilly appreciates the petitioner's initiation of regulatory dialogue on this issue. We look forward to continued participation in the process of developing a regulatory framework that more effectively ensures the appropriate use and disposal of these devices.

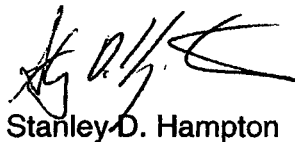
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Sincerely,



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## **Rulemaking Comments**

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**From:** Gallagher, Carol  
**Sent:** Monday, March 29, 2010 10:36 AM  
**To:** Rulemaking Comments  
**Subject:** Comment on PRM-32-6  
**Attachments:** NRC-2009-0547-DRAFT-0007.1[1].pdf

Van,

Attached for docketing is a comment from S. Elizabeth Kay on PRM-32-6 that I received via the regulations.gov website on March 26, 2010.

Thanks,  
Carol

Received: from HQCLSTR01.nrc.gov ([148.184.44.79]) by TWMS01.nrc.gov  
([148.184.200.145]) with mapi; Mon, 29 Mar 2010 10:37:03 -0400  
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Content-Transfer-Encoding: binary  
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To: Rulemaking Comments <Rulemaking.Comments@nrc.gov>  
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