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(75FR01559)

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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DOCKETED
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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

March 12, 2010

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications Staff

Re: Docket ID NRC-2009-0547

Dear Commissioners:

This is to support the petition to request that the NRC revise its regulations to improve the labeling and accountability of tritium exit signs.

Most people know that when they throw things away, it doesn't really go "away". Trash includes items such as exit signs that contain tritium. When these signs are discarded and brought to landfills, the small vials containing the tritium are easily ruptured and the tritium is released. Tritium in excess of the groundwater standard has been found in municipal solid waste landfill leachate. (Mutch, et al., 2008.)

The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) is the professional organization that represents the public servants who are responsible for regulation of municipal sold waste landfills. They have petitioned NRC with some very reasonable requests for revising the regulatory scheme so that tritium exit signs are more readily recognizable as containing radioactive material. The goal is to ensure that these signs are handled appropriately.

ASTSWMO has asked that NRC revise its regulations for tritium exit signs to require a label in several locations on the sign, with larger font. They have requested that an expiration date should be distinctly legible to a fire or building inspector without taking down the sign. They have requested that the radiation trefoil should be displayed on the front and back of advertisements. ASTSWMO recommends that a national collection effort be undertaken to consolidate all expired and disused tritium exit signs. Finally, they recommend that NRC organize a meeting of interested stakeholders to set a new path forward on this issue.

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New Jersey supports all of these actions.

It is estimated that there are over 90,000 tritium exit signs in New Jersey. New Jersey has had two incidents (in 1997) where children were contaminated with tritium from radioactive exit signs. It was only due to quick and comprehensive action by the Department of Environmental Protection (DEP) staff that serious consequences were averted. These actions have been costly, however. Cleanups have cost between $100,000 and $200,000 for the tritium incidents (Feeney, 2002).

After the two incidents in New Jersey, the DEP wrote to all fire and police departments in the state alerting them to the hazards and providing instructions for proper handling should they encounter tritium exit signs. Additionally, letters were sent to all of the building code enforcement officials asking them to take special notice of any of these devices in buildings where a demolition permit was requested (letters available upon request). These actions were necessary because the regulatory scheme for tritium exit signs did not prevent exposure to the public when tritium exit signs were disused.

The ASTSWMO petition contains several ideas for improving the regulatory scheme, but these are not exhaustive. There are many actions which can be contemplated to provide a better regulatory net to catch tritium exit signs before the tritium is released into the biosphere through landfill leachate or accidental release. The most valuable suggestions from ASTSWM is the request to convene a stakeholder group because it may result in a set of initiatives that address tritium from a broader perspective which include manufacturers, distributors, retailers, regulators (state and federal) and consumers.

The Product Stewardship Institute (www.productstewardship.us) maintains a compendium of legislative initiatives pending before State legislatures that are aimed at reducing various toxic elements from the waste stream such as electronic waste, pharmaceuticals, mercury from fluorescent bulbs, thermostats and auto switches, etc. Without national leadership on this issue, it is likely that state legislatures will undertake their own initiatives regarding tritium, which could result in a patchwork of requirements for manufacturers of tritium signs. Device manufacturers would therefore benefit from a national approach to redesign of the regulatory scheme. Quoting the Principles of Product Stewardship, "manufacturers have the greatest ability, and responsibility, to reduce product impacts."

Consumers need to make responsible purchasing, recycling and disposal decisions, but first they need to know what they are buying when they purchase a tritium exit sign. Sales literature on all tritium exit signs should not only state the benefits of the product, but should also make it clear that the device contains radioactive material. The purchaser becomes a general licensee with certain rights and responsibilities. Informing potential customers of their responsibilities prior to purchasing the sign will serve to put them on notice that they must dispose of the sign responsibly, hopefully by returning it to the manufacturer.

Under normal conditions of operation, tritium exit signs pose no significant radiation exposure hazard. However, sales literature (brochures, websites, packaging inserts, etc.) should have some guidance about inappropriate situations for use of a radioactive exit sign. The manufacturer

should describe situations where the use of tritium exit signs should be discouraged so that the purchaser can compare their application with those which are clearly inappropriate, (e.g., prisons or mental health facilities where violent individuals may be present or school gymnasiums where stray basketballs could damage the signs).

Another area for stakeholder input would be responsibilities of distributors. Distributors could be required to obtain a signed statement from a customer that they acknowledge the fact that they have received copies of the requirements for tritium exit signs and they are aware of the rights and responsibilities of being a general licensee.

Stakeholders could discuss whether a possession limit on the number of tritium exit signs at any particular location would be an appropriate regulatory requirement.

One important principle for the stakeholder group to consider is to ensure that all of the product lifecycle costs are included in the total product cost. The current regulatory scheme has allowed clean-up costs associated with improperly handled tritium signs to be borne by government, rather than the manufacturers and consumers of the signs. If these costs are shifted to manufacturers, there would be a direct financial incentive to redesign their products to reduce these costs.

Exit signs serve a very important purpose. Deaths from fires and burns are the fifth most common cause of unintentional injury deaths in the United States (CDC 2006) and the third leading cause of fatal home injury (Runyan 2004). The ability to quickly exit a burning building can mean the difference between life and death. Choosing the appropriate type of illuminated exit sign should be based on life cycle costs based on understanding of all of the implications of maintaining that sign to its proper disposition at the end of its useful life.

Sincerely yours,

Jill Lipoti
Director

References:

Robert D. Mutch, Jr., P.Hg, P.E., and John D. Mahony, Ph.D., "A Study of Tritium in Municipal Solid Waste Leachate and Gas", Fusion Science and Technology, Vol 54, July 2008.

John Feeney, "How Many Agencies Does it Take to Respond to an Incident Involving a Generally Licensed Exit Sign?"

Rulemaking Comments

From: Diane Wysocki [Diane.Wysocki@dep.state.nj.us]
Sent: Friday, March 12, 2010 2:08 PM
To: Rulemaking Comments
Subject: Docket ID NRC-2009-0547
Attachments: Docket ID NRC 2009-0547.pdf

Please see attached.

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