



PRM-32-6  
(75FR01559)

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March 29, 2010

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USNRC

March 30, 2010 (10:00am)

Secretary  
US Nuclear Regulatory Commission  
Washington D.C. 20555-001  
Attn: Rulemakings and Adjudications Staff

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

Reference: Docket# NRC-2009-0547

Dear Commissioners,

Isolite Corporation manufactures and distributes self-luminous exit signs in accordance with Agreement State proceedings under Pennsylvania Radioactive Material Licenses PA-1371 and PA-1371A, as well as, California Radioactive Material License 5457-40GL. We share the petitioner's concern for the proper management and handling of these generally licensed devices throughout their lifecycle and welcome the opportunity to comment on the Petition for Rulemaking submitted by The Association of State and Territorial Solid Waste Management Officials.

Before commenting on the Proposed Action requested by the petitioner, we must address the Background and Summary of Petitioner's Assertions. While it is true that relatively recent sampling of raw, untreated leachate from landfills in Pennsylvania and California found above-background levels of tritium present, it has been determined that, considering the treatment, dilution, and discharge processes to which this leachate is subjected, there is currently no risk to drinking water supplies or possible human exposure.<sup>1</sup> Furthermore, although it is *presumed* that the above-background levels of tritium in the leachate samples has resulted from the improper disposal of self-luminous signs in these solid waste landfills, none of the landfills sampled has found a single self-luminous sign. If the petitioner is correct in stating, and we do not believe they are, that "the majority of unaccounted for tritium exit signs are disposed of in solid waste landfills", we believe that at least one sign would have been found by now to substantiate this assertion.

This is not to suggest that we believe this could not or has not happened. Like many other products, including fluorescent lamps, batteries, and solvents, there is little doubt that some quantity of self-luminous signs may have found their way into the municipal waste stream despite existing regulations. However, if they have, we assert that it is not the result of insufficient regulation or inadequate product labeling.

As a Licensee we are required to comply fully with the requirements of 10 CFR §32.51, §32.51a, §32.52 and all other applicable sections of the CFR. These requirements include:

[REDACTED]

It is completely unwarranted to assert that we do not demonstrate accountability in dispensing exit signs to the proper recipients and recipients are not informed of proper ownership and regulatory requirements. A Specific Licensee's compliance with the NRC's Final Rule amending the Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material which became effective February 18, 2001<sup>2</sup> insures accountability. As a result of these additional requirements, with every order, along with the name and address of the enduser location, we now obtain the name, position, and telephone number of the responsible person. We send the named responsible person a letter that describes what they've purchased, what this purchase means in terms of becoming a General Licensee, and copies of the applicable excerpts from the Code of Federal Regulations.

The petitioner further asserts that "online vendors do not always highlight that tritium is radioactive and that it has special general licensing requirements." It is important to note that the NRC and Agreement States have regulatory authority over Licensees. To the extent that on-line vendors are reselling self-luminous signs without actually taking possession of them for redistribution, they are not Licensees. In these instances, the manufacturer or initial distributor licensed by the NRC or Agreement State must still gather all required end user information from the on-line vendor and send the above mentioned letter with its attachments to the responsible party at the end user. We know this occurs because we do it.

Current Federal Regulations adequately insure that, at the time of purchase, end users are aware of what they've purchased and what their obligations are as General Licensees. As a responsible manufacturer and distributor of self-luminous signs our efforts do not stop with the initial transfer of the device. For more than a decade, we have been working on our own national collection effort. It began by contacting endusers of expired signs to alert them to their regulatory obligations and provide them with an opportunity to replace their expired signs. As this process grew and developed, we created documentation to assist the enduser with their reporting requirements when returning their expired signs. In 1998, we submitted a request to the NRC under the Freedom of Information Act for all distribution records submitted under §32.52 for tritium exit signs in the General Licensee Database (GLDB) in an effort to try to include them in our national collection effort. Regrettably, our request for information was denied and, as a result, our outreach has been limited to our own customer database.

We have full-time staff dedicated to the process of contacting endusers to facilitate the return and replacement of expired exit signs. As a matter of procedure, we contact endusers of self-luminous signs 3 months prior to the expiration date of their installed signs alerting them of their disposal obligations and options while offering replacement alternatives. There's no doubt that this is an important service that needs to be performed by our industry. The potential financial benefit resulting from the sale of replacement signs insures that it will be done.

Changes to product labeling are unlikely to improve accountability for the handling and ultimate disposition of self-luminous signs. Even a casual inspection of current labeling indicates that the product has a radioactive component and is not to be discarded into the normal waste stream.

As desired by the petitioner, the expiration date is visible on our signs without removing them from service. While we believe that all signs should be replaced when they have expired and no longer meet the applicable fire safety code, this issue is certainly outside the mandate of the NRC and, if it's to be changed, must be addressed by the appropriate fire safety regulators.

It should be noted that we are manufacturers and distributors of self-luminous, LED, and photoluminescent exit signs. Based on the petitioners' contention that advances in photoluminescent technology over the past decade have demonstrated an effective alternative to self-luminous signs in places without electricity, it is clear that the petitioner has little understanding of this technology. By their very nature, photoluminescent signs require electricity. Although the signs do not have electrical components, the photoluminescent compounds require an activating light source to charge them. Without an activating light source, the signs are invisible in the dark. In fact, current fire safety codes require an electrical light source to provide a minimum of 5 foot-candles of unfiltered light on the sign face at all times of building occupancy. Obviously, this cannot be construed to be an effective alternative for self-luminous signs.

Now, we turn our attention to the petitioner's Proposed Action as outlined in Docket No. PRM-32-6; NRC-2009-0547 and assert the following:

1. Self-luminous exit signs are the most energy efficient and reliable means of egress marking available on the market today. Photoluminescent and electrical LED signs cannot offer the same benefits or replace the need for self-luminous signs<sup>3</sup>. The petitioners desire to see self-luminous signs replaced by alternative technologies is without merit.
- 2(a). Current labeling requirements are satisfactory. If, however, it is determined that it would be helpful, the labeling requirements of §32.51 could include the addition of simple wording to the existing label or the addition of a supplemental label that might read as follows:

**DO NOT THROW AWAY  
DO NOT DISCARD IN SOLID WASTE  
ABANDONMENT OR DISPOSAL PROHIBITED**

Further, §32.51 requires that "Each device bears a durable, legible, clearly visible label or labels approved by the Commission." Neither font type nor size is stipulated in the regulation. Reasonable application of the existing requirements does not warrant changes or additional regulation.

- (b). The requested changes to the expiration date labeling is beyond the purview of the NRC and completely unrelated to the end of life disposition of the signs.
- (c). The addition of the radiation trefoil on the front and back of advertisements will in no way aid in the control or accountability of self-luminous signs.

Further, the NRC defines the trefoil as a "Radiation Warning Symbol" which must be displayed where certain quantities of radioactive materials are present or where certain doses of radiation could be received."<sup>4</sup> Since neither of these conditions applies, we believe it is inappropriate to use the trefoil on sales and marketing literature.

3. While we would welcome the opportunity to participate in a dialogue with the NRC, the ASTSWMO, and other interested stakeholders on the issue of proper lifecycle

management of self-luminous signs, a national collection effort with distinct milestones and goals to consolidate all expired and disused tritium exit signs is inappropriate. Expired signs are affixed to walls throughout this country marking the path of egress, albeit less effectively than fire codes allow. Despite our efforts to ensure that expired signs are replaced and disposed of in a responsible manner, for whatever reason, not all endusers choose to replace their expired signs. Although the luminance of the sign no longer complies with the applicable standard, the signs still function. As regards fire safety, the reader should be aware that at the same time, without doubt, there are a far greater number of non-functioning electrical exit signs also in service. We can't comment on disused signs as we don't know what they are. However, as mentioned before, it is not the NRC's mandate to regulate fire safety.

We appreciate the opportunity to share our views on the pending Petition for Rulemaking and are available to answer any questions.

Regards,

  
William E. Lynch Jr.  
President



William R. Rowan  
Director of Regulatory Compliance

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<sup>1</sup> Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection, and Bureau of Waste Management, "Radiological Investigation Results for Pennsylvania Landfill Leachate – Fall 2005 Tritium Update" Project No. 040-195, April 7, 2006.

<sup>2</sup> Federal Register / Vol. 65, No. 243 / Monday, December 18, 2000 / Rules and Regulations

<sup>3</sup> <http://www.nema.org/stds/LSD46.cfm#download>

<sup>4</sup> <http://www.nrc.gov/reading-rm/basic-ref/glossary/radiation-warning-symbol.html>

## Rulemaking Comments

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**From:** Gallagher, Carol  
**Sent:** Tuesday, March 30, 2010 9:27 AM  
**To:** Rulemaking Comments  
**Subject:** Comment on PRM-32-6  
**Attachments:** NRC-2009-0547-DRAFT-0009.1[1].pdf

Van,

Attached for docketing is a comment from William Lynch on PRM-32-6 that I received via the regulations.gov website on March 29, 2010.

Thanks,  
Carol

Read  
Date  
Sent  
From  
Subject  
Action

at

File

File

File  
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Received: from HQCLSTR01.nrc.gov ([148.184.44.79]) by OWMS01.nrc.gov  
([148.184.100.43]) with mapi; Tue, 30 Mar 2010 09:27:05 -0400  
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Content-Transfer-Encoding: binary  
From: "Gallagher, Carol" <Carol.Gallagher@nrc.gov>  
To: Rulemaking Comments <Rulemaking.Comments@nrc.gov>  
Date: Tue, 30 Mar 2010 09:27:02 -0400  
Subject: Comment on PRM-32-6  
Thread-Topic: Comment on PRM-32-6  
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X-MS-TNEF-Correlator:  
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