

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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ATTN: Rulemakings and Adjudication Staff

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Subject: Docket ID NRC-2009-0547
Petition for rulemaking regarding tritium exit signs

To Whom It May Concern:

Dade Moeller & Associates, Inc. (Dade Moeller) appreciates the opportunity to comment on the petition for rulemaking submitted by the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) regarding the control of tritium exit signs. Our firm provides health physics expertise and advice to governmental agencies and private enterprises throughout the United States. We generally support the recommendations made in the petition, although we arrive at this conclusion by different reasoning than the ASTSWMO representatives.

First, we at Dade Moeller do not believe that the inadvertent disposal of tritium exit signs poses a significant public health and safety issue, even if the relatively large numbers suggested by ASTSWMO are accurate. When the U.S. Nuclear Regulatory Commission (NRC) first approved the distribution of these signs under a general license, it would have been with the understanding that some fraction would be disposed inappropriately, but without jeopardy to public health and safety. In addition, in the landfill studies cited by ASTSWMO, it is important to note that there has not been any evidence of actual groundwater contamination. The contaminated leachate has been retained by the landfill liners. Even if there were a liner breach, and some tritium-contaminated leachate contacted groundwater, the associated doses and risks to the public are infinitesimal. While we do not dispute that the signs disposed in this inappropriate manner could potentially result in detectable groundwater contamination, this does not necessarily translate to significant doses or risks to the public or the environment.

Second, although the risks are low, we do support the notion that tritium exit signs should be phased out. Our concerns focus on the general lack of controls established by many general licensees and unclear requirements regarding the handling of broken signs and any resultant contamination. As ASTSWMO points out, the end users of these signs apparently do not have sufficient notice of their obligations under the general license, which has led to improper disposal. Furthermore, appropriate actions are not always taken when a sign is damaged; this is due, in part, to the fact that the various Agreement States each have different cleanup criteria, which oftentimes are vague or difficult to interpret by a general licensee. Consequently, general licensees may incur significant, unanticipated expenses including potential litigation and potential regulatory violations, which far outweigh any benefits provided by the signs, especially considering the availability of alternative exit sign technologies. Additionally, improper handling can

result in contamination inside facilities and small but measurable doses to members of the public or unmonitored workers.

For these reasons, whether or not the petitioner's recommendation that the signs be phased out is ultimately accepted by the NRC, we believe that more definitive regulations or guidance are warranted to ensure that damaged signs and any resultant contamination are addressed properly. For example, our experience suggests that most general licensees are unaware of the guidance in NUREG-1556, Vol. 16, Appendix L, and, for those who are aware, the language does not clearly describe how they should proceed. For example, the guidance in Appendix L, Item 8 beginning with "If contamination occurs, appropriate cleanup is required by a person specifically authorized by NRC for this activity," is problematic because:

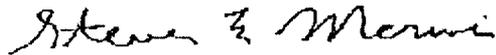
- It is not reasonable to expect general licensees to recognize situations in which contamination has occurred.
- Contamination is usually present at some level for any damaged sign – in fact, detectable contamination often exists on the mounting surfaces behind fully intact signs due to tritium migration over time.
- General licensees do not typically understand who is "specifically authorized by NRC" to handle radioactive contamination, nor are they typically aware of the associated regulatory requirements that take effect when their facilities have become contaminated by generally licensed devices; this is further complicated by the fact that these requirements often vary among the Agreement States.

Although these problems could be partly remedied by a revision to the guidance, we also support the regulatory changes suggested by ASTSWMO, which include additional and more prominent labeling of the devices themselves, and a more robust requirement for the manufacturers and distributors to inform their customers of their obligations under the regulations.

Finally, we support the "national collection effort" proposed by the ASTSWMO petition. In fact, we have advocated such a program in the past.* Because the signs are scattered among tens of thousands of general licensees across the country, without a concerted effort on a national level to gather existing signs, the signs are likely to continue to be lost, damaged or improperly disposed, even with the regulatory changes suggested by ASTSWMO. As part of this effort, we suggest that federal stimulus money be pursued by the NRC, or other appropriate federal agency, to ensure that signs in public buildings (such as schools and libraries) are safely collected in a timely and orderly manner and in compliance with applicable regulations, and that they are replaced by an alternative technology not involving radioactive materials. For example, the funding mechanism and structure could be similar to the EPA-administered State Indoor Radon Grant program, with monies distributed to states for the purpose of developing and implementing a collection and replacement program. Such a program might be implemented by individual states on a local level, or could include a state-wide effort by an appropriately licensed and qualified contractor to provide for inventory and collection

of the signs, evaluation and decontamination (as necessary) of facilities possessing these signs, and transfer or disposal of the signs. In particular, such a program would benefit the public and non-profit entities using these signs, who may not be able to otherwise obtain funding for their removal and replacement. We strongly believe that such an initiative is the only way to ensure that the majority of tritium exit signs currently installed in buildings across the U.S. are not lost, damaged, or improperly disposed.

Respectfully,



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* Moeller, M.; Allard, D.; and Hamrick, B. "Tritium Exit Signs – The Need for an Amnesty Program."
Presentation at the Annual Meeting of the Health Physics Society, Minneapolis, MN, July 14, 2009.

Rulemaking Comments

From: Semerwin@aol.com
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