



From the EPA's (Environmental Protection Agency) website:

"Tritium (chemical symbol H-3) is a radioactive isotope of the element hydrogen (chemical symbol H). It is used in various self-luminescent devices, such as exit signs in buildings, aircraft dials, gauges, luminous paints, and wristwatches. Tritium is one of the least dangerous radionuclides because it emits very weak radiation and leaves the body relatively quickly." Tritium is safe and has replaced radium (which has been banned for use in the United States) for a luminescent source in watches and gauges. Disposal of broken signs should be arranged through the manufacturer or health physics consultant."



Information Bulletin – Tritium Exit Signs

On January 16, 2009, the U.S. Nuclear Regulatory Commission (NRC) issued press release No. 09-11, asking 61 organizations to check tritium exit signs in their possession against their records and to report any lost or missing signs (<http://www.nrc.gov/reading-rm/doc-collections/news/2009/09-011.html>). This action was taken following accounts of thousands of lost, missing, or otherwise unaccounted for signs nationwide. The NRC wants to be certain that organizations are aware of their responsibility to account for tritium exit signs in their possession and to dispose of them properly at the end of their useful life. Tritium Exit Signs containing the radioactive gas tritium are widely used in public and private office buildings, stores, hotels, theaters, schools, and churches identifying a rapid exit path in emergencies. More than 2 million Tritium Exit Signs are estimated to be in use in the United States. Tritium Exit Signs are the most reliable exit signs available today since they require no external energy source or batteries and are maintenance free. Although the radiation risk from these signs is small compared to the benefit of saving lives, they can only be possessed under a “general license” from the Nuclear Regulatory Commission (NRC) or an Agreement State. **If your company possesses these signs, you need to be aware that under the general license you are subject to certain reporting and handling requirements, including proper disposal of unwanted or unused signs.** Proper handling and recordkeeping are important, because a damaged or broken sign could cause radioactive contamination of the immediate vicinity, requiring a potentially expensive clean up. Improper disposal has resulted in tritium-contaminated water in landfill cells, which can pose a threat to nearby groundwater. During normal use, tritium EXIT signs pose little or no threat to public health and safety and do not constitute a security or terrorist risk. However, the NRC requires proper recordkeeping and disposal of all radioactive materials.

Dade Moeller & Associates is experienced with the inventorying signs against records, safe handling of tritium exit signs, cleanup and recovery following damage or breakage of signs, and returning unbroken signs when no longer in service. Our clients rely on us to:

- Assist in inventorying signs against records,
- Assure compliance with pertinent NRC and State regulations,
- Recovery of damaged signs,
- Assessing and decontaminating tritium residues,
- Managing and disposing of generated wastes,
- Performing radiation dose assessments,
- Consulting with employees on health risks, and
- Assisting companies with litigation and cost avoidance.

For more information, please contact:

Steve Merwin, CHP

Dade Moeller & Associates, Inc.

(509) 946-0410, ext. 215

www.moellerinc.com