

Tritium Exit Sign Guide

The Kansas Radiation Control Program has prepared this fact sheet to inform the owners of tritium exit signs of the proper disposal methods and the hazards associated with these devices. Owners of tritium exit signs must comply with the regulatory requirements found in the Kansas Administrative Regulations (K.A.R) 28-35-178b.

What is tritium?

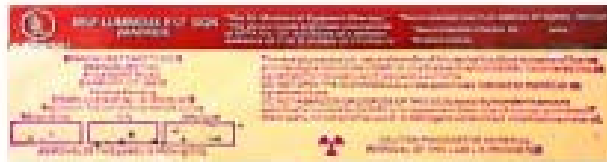
Tritium is a radioactive isotope of the element hydrogen.

What are tritium exit signs and how can I identify them?

Tritium exit signs are signs that display the word “exit” to identify the designated exit route from a building or enclosed space. They are typically used in buildings to illuminate egress routes in areas where access to electrical service is unreliable, unavailable or costly. Tritium exit signs are self-luminous and require no electrical power.



This type of exit sign can be distinguished from others by observation. The signs illuminate with a greenish glow emanating from several sealed glass tubes arranged into the word “exit.” Another indication that the sign may be a tritium exit sign is the lack of evidence of an electrical power supply. The sign may also be identified by the required labeling, similar to that shown below, which includes the three bladed radiation symbol and the words “Caution – Radioactive Material,” as well as other information about the quantity of radioactive tritium and the manufacturer.



Regulation of Tritium EXIT Signs

Tritium exit signs are regulated by the Nuclear Regulatory Commission (NRC) under federal regulations (10 CFR 32.51 and 31.5a) or by a state authorized to administer its own comparable program (an Agreement State). Kansas is an agreement state and regulates these signs. Under the Kansas regulations, persons purchasing tritium exit signs are automatically issued a general license to acquire and use these devices. Kansas Administrative Regulation (K.A.R.) 28-35-178b contains the regulations for the general license for tritium exit signs. The K.A.R.s can be found on the Kansas Radiation Control website at <http://www.kdheks.gov/radiation/regs.html>.

What is the concern?

Often, building maintenance personnel or construction/demolition workers may be unaware that the devices contain radioactive material. As a result, these devices may end up in landfills, incinerators and at scrap metal recycling facilities. Improper disposal can result in tritium releases to the environment or accidental human exposure.

What am I required to do as an owner of a tritium exit sign?

- Ensure that all labels affixed to the device are maintained.
- Follow instructions and precautions provided by the label.
- Notify the Kansas Radiation Control Program immediately if damage to the exit sign results in the breakage of the tubes containing the tritium.
- Ensure that the sign is not abandoned
- Ensure that regulatory conditions are met for transfer of the sign. Contact the Kansas Radiation Control Program for information or view the regulations at <http://www.kdheks.gov/radiation/regs.html>.
- Respond to requests for information from the Kansas Radiation Control Program within 30 calendar days.
- Appoint an individual responsible for having knowledge of the appropriate regulations and requirements and the authority for taking actions required to comply.
- Ensure day-to-day compliance with the regulatory requirements.

How do I ensure safe and legal disposal?

Contact the sign manufacturer for instructions and return cost information. If the manufacturer is unable to accept return of the device, other manufacturers of similar devices, provided they are licensed to accept tritium, may accept the signs. Alternately, you may consider use of a radioactive waste broker or processor to perform packaging, transport and disposal of unwanted tritium signs.

If you own exit signs containing tritium, it is your legal responsibility to ensure the proper disposal or recycling of these products. It is illegal to abandon or dispose of self-luminous signs, except by transfer to companies licensed by the NRC or by a state authorized to administer its own comparable program (an Agreement State). Manufacturers of the devices have radioactive materials licenses, which allows them to accept the return of the devices. **The devices cannot be discarded in municipal or industrial trash, nor disposed as a hazardous waste.** Improper disposal can result in tritium releases to the environment or accidental human exposure.

Where can I find additional information?

For a list of radioactive waste brokers and processors, visit the Conference of Radiation Control Program Directors (CRCPD) website at

<http://www.crcpd.org/StateServices/CommercialServices/OutletsforRadMat.pdf>.

For more information regarding your responsibilities concerning these or other radioactive materials, contact the Kansas Radiation Control Program, 785-296-1560. Visit the Kansas Department of Health and Environment Website at <http://www.kdheks.gov/radiation>.