

Advisory on Sealed Source Disposal

The Texas Radiation Advisory Board (TRAB) consists of the state's expert advisors on issues relating to radiation and radioactive materials. Board members make recommendations about various issues and provide those to the agencies, the legislature and the governor. As such, TRAB would like to address the topic of public safety and national security with respect to the disposal of sealed sources in Texas

Radiation exposure to all members of the general public occurs continually. People are exposed to three broad categories of radioactive sources: natural occurring radioactive material (NORM), technologically enhanced naturally occurring radioactive material (TENORM), plus medical and industrial sources of radiation. Many industries use radioactive sources in its processes.

Industrial applications of radiation sources range from:

- density and level measurement,
- devices to radiograph/x-ray pipes
- oil well logging.

Medical applications of radiation sources include:

- radioactive seeds used in cancer treatment
- bone density measurements
- brain tumor therapy,

When the owners of these sources no longer need them, they have several options; return the sources to the manufacturer, manifest the sources as waste from their site for disposal (either by them directly or through a broker) or store the sources on site, until there is a disposal facility licensed to accept the sources. For many years there was no place in the US available to Texas licensees to dispose of these sources; so companies were forced to store the sources that were no longer needed (disused sources) on site.

The solution to what to do with disused sources is simple: they need to be disposed of at a licensed facility. In 2014 the Low-Level Radioactive Waste Forum Disused Sources Working Group (Working Group) generated a report on recommendations to facilitate the disposal of sealed sources in the US. In general the TRAB endorses the recommendations of this report. Also, the TRAB recommends that the Texas Department of State Health Services (DSHS) and the Texas Commission on Environmental Quality (TCEQ) review this report, evaluate the recommendations, and support and implement these recommendation to the extent possible.

One of the recommendations from this Working Group is to promote the recycling and reuse of sources. In order for recycling to be a significant effort, the manufacturer, distributors and service companies need to be the primary recyclers. Most companies that possess and use sources, for industrial purposes, are not qualified to evaluate the source for reuse or recycling. It is important that manufactures, distributors, and service companies continue to be allowed to accept and ship sources as radioactive material rather than waste, as this streamlines the process. There are significant incentives for users to recycle disused sources: it costs a lot less to recycle a source than to buy a new one, and in many cases the source can be reused in its original container. Several manufacturers have been recycling for quite a while, and have increased their efforts as of late.

One current policy inhibits recycling. If one uses the current definition in TCEQ's policy of the last beneficial user, this user has to be the generator. In many cases the last user of the source has no means of recycling or reusing the source and must transfer the source to a manufacturer, distributor or service company with recycling capabilities. The TCEQ's definition in policy of last user needs to be changed in order to better promote recycling.

Sealed sources were collected post 9/11 for the promotion and protection of the public and national security. The idea then was that the sources, if collected by knowledgeable source handling facilities, were more secure in one location than in the many locations of several users. If that was the case, then it is the case now. The need to dispose of sources should be a business decision of the source users. Sources that have been collected for about the last two decades by recyclers, manufacturers, brokers, etc., were transferred to their license by a source transfer and have been on their inventories for many years. There is no reason to believe that these sources are not the rightful property of the above people, and they should be treated as being the generator of these sources once they are declared waste. In order to promote the disposal of these old disused sources, special provisions needs to be made for those sources that were collected before the regulations for waste disposal at the Texas disposal site were promulgated. A simple one time exemption for sources older than this will allow such sources to be disposed of promptly and safely.

Regarding the Working Group's implementation of increased controls for Category 3 sources (sources with less radioactive material than Category 1 and 2 sources), the Category of the source is independent of the need to dispose of a source. Even a small amount of radioactive material can cause a large reaction from the public. If any radioactive material, regardless of how small or large it is, the reaction from the public is usually the same. Security of all Category 3 sources, needs to be better addressed. If the idea is that the safest location for all these sources in one secure disposal facility rather than several different storage facilities, disposal of disused sources needs to be facilitated.

Since public safety and national security are a prime reasons for consolidating sources, at a disposal facility, then certain sources of foreign origin, used in domestic applications, must also

be allowed into the Texas disposal facility. Otherwise, this increases the possibility of the sources being stored for an indefinite amount of time by the users and possibly being abandoned. The decision could be made on a case by case basis in order to prevent deliberate attempts to improperly dispose of foreign sources that have other disposal options.

Respectfully submitted

TRAB