

## *Fact Sheet on Sealed Radioactive Source Management*

- **What are the issues?**

Sealed radioactive sources have been used in a wide range of application in Medicine, agriculture, geology, industry and other fields. Since its utilization many sources have become out of use and became waste but no proper management. This has led to many accidents causing deaths and serious radiation injuries worldwide. Spent sources application is expanding but their management has seen little improvements. Sealed radioactive sources have become a security risk calling for prompt action.

- **What are the benefits of source management?**

Source management helps to maintain sources in a good physical status and provide means of source tracking and control. It also provides a well documented process of the sources making any future management options safe, secure and cost effective. Last but not least good source management substantially reduces the risk of accidents and eliminates the risk of malicious use.

- **What services does Waste Technology provide?**

We provide assistance to Member States to build the infrastructure to properly manage sealed radioactive sources. The assistance includes training of national experts to handle, condition and properly store the sources. For Member States that do not have proper facilities, we provide the technical assistance to design a proper facility to properly manage the radioactive sources and provide for their proper storage. For Member States that need to condition their sources properly but don't have the required infrastructure we provide direct assistance to physically help them with source recovery and provide an international expert team to properly condition their sources and render them safe and secure. This service has been recently extended to include Spent High Activity Radioactive sources (SHARS), thanks to the development and construction of a mobile hot cell that allows the recovery and conditioning of SHARS. We offer software (Radioactive Waste Management Registry) to properly keep a complete record on the sources and provide for efficient tracking. This also helps with proper planning and decision making for long term management.

In addition to maintaining a service through Member States access to the International Catalogue of Sealed Radioactive Sources and Devices, we also provide expert support to Member States to identify unknown and orphaned sources.

- **What are recent Waste Technology Section activities on source management?**

- We have provided technical support to a number of Member States to design and build a sealed radioactive source processing facilities.
- A number of Member States with source storage problems have been assisted to design and manufacture proper storage shields for the intended purpose.
- Sealed radioactive sources have been conditioned for long-term storage utilizing international expert teams.
- Technical procedures to condition, Radium, neutron sources and other gamma emitting sources have been developed and validated and are available to Member States.
- Long-term storage shields designs have been developed and available to be utilized by Member States.
- Mobile source facility installations have been developed and their know-how and usage can be transferred to Member States with the right expertise.

- **How to benefit from this activity?**

Member States interested in starting their own source management infrastructure, or need their sources conditioned by the Agency should contact the Technical Cooperation Department of the Agency.

Member States interested in knowing more about the Agency's programme on source management should contact e-mail: [source@iaea.org](mailto:source@iaea.org)