

FACT SHEET

Life Cycle Management of Cobalt-60 Sources

Cobalt-60 Sources

Cobalt-60 sources utilized in large irradiators provide the ionizing energy that is used primarily to sterilize many different types of single-use medical products such as gloves, gowns, drapes and swabs. Gamma irradiators using Cobalt-60 also process a vast array of consumer products, foods, and spices. There are more than 160 irradiators around the world processing over 200 million cubic feet of product every year. Over 600 million curies have been shipped to customers around the world over the past 40 years.

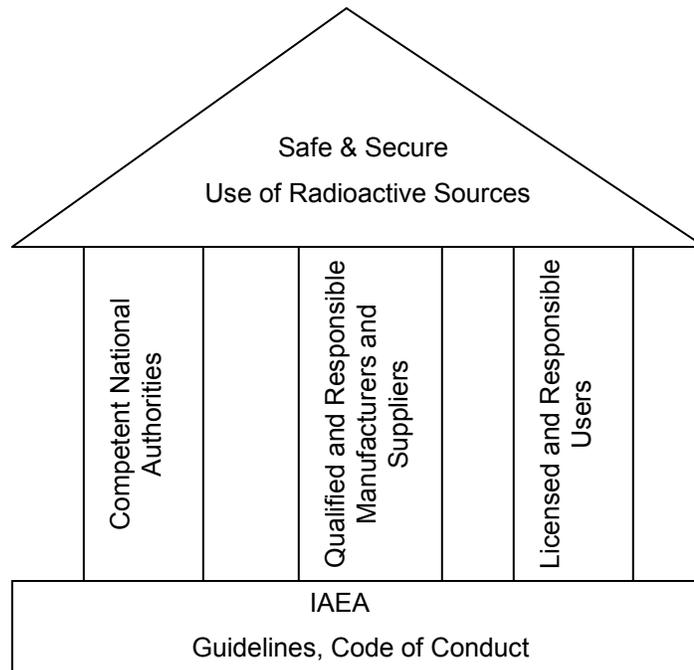
Life Cycle Source Management

A life cycle approach to source management is a well established process in the long-term control and security of radioactive sources, enhancing the beneficial use of gamma irradiation technology.

The life cycle source management begins at isotope production and carries through to source encapsulation, distribution, use, recovery and spent source management. The life cycle approach ensures the safe and secure use of radioactive sources throughout their useful life and beyond meeting stringent regulatory requirements.

An integrated approach is used whereby regulators, manufacturers, suppliers and users all have specific, but complementary and overlapping roles and responsibilities.

Life Cycle Management Structure





Regulators

The IAEA sets the international regulatory platform for the life cycle of Cobalt-60 sources. The IAEA guidelines set out the requirements for consistent development and application of control measures to enhance safety and security. The IAEA develops and implements the Code of Conduct and ensures the Competent National Authorities are effective in the application of the guidelines.

The Competent National Authorities adopt the IAEA guidelines and develop national regulations and security measures. These regulations must be consistent, coherent and effective. There must be international co-operation in the application of the regulations.

Manufacturers and Suppliers

Manufacturers and Suppliers must develop a risk-based approach to source management strategies. Management must have an oversight of the company safety culture, quality systems, training and security measures and procedures.

The Manufacturers and Suppliers must take steps to mitigate the consequences of risk. These steps include irradiator design, source manufacture, transportation and transfer, source retrieval and spent source management.

Users

Users own the sources while they are in the field. Users must have a source management strategy that includes source tracking and control, regulatory compliance, mitigation of risk while the source is in use, and timely return of disused sources.

Users must have a safety culture, quality systems, training and security measures and procedures while the source is being used.

Integration

Regulators, Manufacturers, Suppliers and Users all have individual and joint roles and responsibilities. These roles and responsibilities must be integrated, as there is overlap in most areas. All have a role to play in the life cycle management of Cobalt-60 sources, mitigation of consequences of risk, source tracking, regulatory effectiveness and emergency response.

For additional *GIPA* Fact sheets, see www.gipalliance.net

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