

# Global Radiological Security

*Managing Potential Risk Today*

Radioactive sources play an important role in commercial, medical, and research applications—but to ensure global security, the benefits of these materials must be balanced with security. The Department of Energy/National Nuclear Security Administration’s (DOE/NNSA) Office of Radiological Security (ORS) works with international partners in more than 80 countries to enhance the security of high-activity radioactive sources worldwide. Securing radioactive sources helps prevent unauthorized access to materials that could be used in a radiological dispersal device (“dirty bomb”) or in other acts of terrorism. ORS focuses its resources on the security of sources including cesium-137, cobalt-60, americium-241, and iridium-192.

## Radiological Security Worldwide

ORS collaborates with a broad range of partners including government regulatory authorities, responders, industry, and international organizations. ORS employs the following three strategies to enhance global radiological security.

- **PROTECT** radioactive sources used for vital medical, research, and commercial purposes.
- **REMOVE** and dispose of disused radioactive sources.
- **REDUCE** the global reliance on high-activity radioactive sources by promoting the adoption and development of non-radioisotopic alternative technologies.

## Protection of Radioactive Sources

ORS works with organizations to evaluate partners’ existing security systems and fund the installation of new security features and systems, should they be necessary. This enables the use of an “alert and notify” security strategy, whereby critical alarms and video assessment can be transmitted to off-site responders.

ORS security enhancements can include motion sensors, radiation sensors, access control systems, video assessment, electronic tamper seals, remote monitoring to off-site locations, and delay elements such as hardened locks, doors and safes, and bulletproof glass. ORS-recommended security enhancements are consistent with International Atomic Energy Agency guidelines.

## Providing Sustainable Solutions

Partnering with countries across the world, ORS develops and enhances national radiological security regimes to promote sustainable security. This includes the implementation of regulatory development, security planning and training, transportation security, response planning and training, response exercises, and the strengthening of inspection and enforcement regimes.



ORS also provides site security sustainability efforts, with tools for site security procedures, maintenance plans, system testing, and response plans.

## Source Removal

ORS partners with countries and international organizations on the proper removal of disused radioactive sources, helping to eliminate excess, unwanted, abandoned, or orphaned radioactive sealed sources that pose a threat to security, public health, and safety. Through its collaborative effort, radioactive sealed sources are placed in a secure storage location in country or, in some cases, repatriated to their countries of origin. The ORS Search and Secure project supports partner countries with equipment and training needed to search for these orphaned or abandoned sources.

## Promoting Alternative Technologies

ORS is engaged in efforts worldwide to reduce the global reliance on high-activity radioactive sources by promoting the adoption and development of non-radioisotopic alternative technologies. The result is permanent threat reduction through the elimination of risk-significant radioactive sources. ORS is working to exchange information on the status of technology, invest in and encourage the improvement of technologies, understand and reduce obstacles preventing implementation, and promote the transition to alternative technologies whenever feasible.



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