

Security of radioactive sources used in gamma irradiators and at facilities that store, handle and distribute Cobalt-60 sources

In-person free of charge workshop
9 - 10 December 2026 in Vienna, Austria

Background

Gamma irradiation facilities use high activity cobalt-60 radioactive sources to treat a wide range of products and materials. The largest application of gamma irradiation is the sterilisation of single-use medical devices such as surgical gloves, syringes, catheters and surgical implants used in surgery, wound care and other medical treatments. The radiation processing industry, which includes gamma irradiation facilities, is mature, heavily regulated and has an exemplary safety and security record.

Operators of gamma irradiation facilities range from multinational organisations with multiple sites to small organisations with a single facility. These organisations operate under a variety of legal and regulatory frameworks and have their own internal arrangements and procedures.

Radioactive sources used for gamma irradiation have the potential to cause significant harm if not correctly managed. A security incident could negatively impact business operations, the reputation of an organisation and the wider irradiation community. An organisation could be held liable for damages, lose business and/or access to its facilities, and face an organisational crisis.

The risk of criminal activity and terrorism remains a concern, and the incidence of cyberattacks has increased significantly in recent years. It is therefore important that security arrangements for gamma irradiators and other facilities that handle cobalt-60 are assessed and updated on a regular basis. The radiation processing industry needs opportunities to meet, discuss and share practices, and learn from experience.

WINS, with the support of IIA, has therefore decided to organise a one-and-a-half-day international event, with a focus on European practitioners, to foster exchange among the gamma irradiation community and support resilient and sustainable security arrangements across the industry.

Objectives

The workshop will share operational experience and good practices for the security of Co-60 sources used by the gamma irradiation industry, with a focus on:

- Maintaining a consistent level of security throughout the supply, use, storage and return of Co-60 radioactive sources
- Security by design
- Identifying and addressing credible threats and attack pathways
- Physical protection
- Strengthening response arrangements
- Integrating cybersecurity and physical security considerations

The workshop will also discuss, assess and gather further feedback on:

- Security during source reloading and irradiator maintenance operations
- The pool obscurant system currently under development

The workshop will share and review industry practices for conducting security assessments and supporting continuous improvement.

It will briefly review alternative technologies to gamma irradiation and their implications for security requirements.

The workshop will foster engagement and interaction among participants, with the aim of supporting further collaboration within industry and with international partners.

Audience

The target audience includes operators of commercial and research-scale gamma irradiators that use high-activity cobalt-60 sources; organisations that store, handle and distribute cobalt-60 sources to gamma irradiator operators; regulators; law enforcement agencies; and other stakeholders with an interest in the security of radioactive material.

The target number of participants is 40.

Location, date and timing

Vienna, Austria (ARCOTEL Kaiserwasser)

Wednesday 9 December 2026 (full day) and Thursday 10 December 2026 (morning only).

Reference materials

- iia/WINS Best Practice Guide
- iia/WINS Methodology for Assessing the Effectiveness of Security Arrangements at Gamma Irradiation Facilities
- iia/ORS Cybersecurity Best Practice Guide
- iia/ORS Guide for Assessing Cybersecurity Programmes
- IAEA Nuclear Security Series 11-G

Speakers, contributors and programme

Members of the gamma irradiator community, particularly from Europe, will be encouraged to join the event and present their approaches to security. Selected organisations will be invited to share their experience piloting the iia/WINS assessment methodology and developing cybersecurity measures or exploring obscurant systems with Sandia National Laboratories.

Operators of source handling and distribution facilities will share their perspectives and representatives from other stakeholder groups, such as regulatory bodies and law enforcement agencies, will provide complementary perspectives to ensure a global and comprehensive approach to the topic.

The workshop will comprise of presentations, panel discussions, Q&A sessions and participant contributions. This format will enable the sharing of key information, in-depth discussion of selected topics and collection of participant feedback.

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