The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Radioactive Sources: Applications and Alternative Technologies

Virtual Meeting Agenda

June 26, 2020, 10:00-11:30 (EDT)

Connection details:

Link: https://nasem.webex.com/nasem/j.php?MTID=m3a4316b000d38ee715ba567e86607871
Meeting ID: 165 845 0638
Password: XBskVJc2W82
Telephone: +1-650-215-5228 or +1-301-494-9606
Access code: 165 845 0638

10:00 am – 10:10 am	**Call Meeting to Order and Welcome** Bonnie Jenkins, Committee Chair and Charles Ferguson, Study Director
10:10 am – 10:35 am	**Perspectives on Alternative Technologies from the World Institute for Nuclear Security (WINS)** Pierre Legoux, Head of Programmes, WINS
10:35 am – 10:50 am	**Q+A and Discussion**
10:50 am – 11:15 am	**Perspectives on Alternative Technologies from the International Irradiation Association (IIA)** Paul Wynne, Chairman, Director General, IIA
11:15 am – 11:30 am	**Q+A and Discussion**
11:30 am	**Closing Remarks** Bonnie Jenkins, Committee Chair

Speaker Bios

Pierre Legoux joined WINS in 2010 as manager of the operational programme. His responsibilities include programme design, operation, budget control, review and quality standards. Prior to joining WINS, Pierre served 7 years as physical protection specialist at the IAEA's Office of Nuclear Security, where he developed international recommendations and guidance documents for nuclear security and for strengthening the physical protection of nuclear and other radioactive materials in use, storage and transport. He was seconded to the IAEA from the French Atomic Energy Commission.

Paul Wynne is a Chartered Accountant. He joined Isotron plc – a UK based international contract irradiation company in 1987 and was part of the management team that expanded the gamma technology base to include electron beam and X-ray during the 90's. In 1999-2000, Paul worked in Malaysia to manage the construction of a large gamma irradiation facility. He was involved in the acquisition, and management of Gammaster from 2001 and in 2004 he was a founding director of the International Irradiation Association. Subsequent to an acquisition Paul worked for Synergy Health from 2007. He later managed the construction of sterilization facilities in China. He was appointed Regional CEO Asia and Africa at Synergy in 2010. He is now a consultant and is Chairman and DG of IIA.

Sample Questions Submitted to Speakers

- Introduce the organization and scope
- To WINS: Does WINS keep a database of how many sources are deployed and their status including repatriation efforts? If yes, could you provide a breakdown of sources for medical applications, sterilization (medical device sterilization, SIT, phytosanitary, food, and miscellaneous uses), and other applications?
- To WINS: Sources of security concerns and reasons; efforts of the organization to reduce those risks
- Views on needs for alternative technologies nationally (US) and internationally and work of the organization in facilitating use of alternatives
- Examples of promising alternative technologies being developed for different applications (medical, industrial, other) with emphasis on potential game-changers
- Examples of applications without good alternatives and reasons; suggestions on reducing risks linked to those applications
- Challenges with adopting alternative technologies nationally (US) and internationally (e.g., costs, other resources, training)
- Suggestions on companies or other entities the committee should hear from
- Advice on this committee's work

Suggested Reading

WINS

- 5.1 Security of High Activity Radioactive Sources
- 5.4 Security of Radioactive Sources Used in Medical Applications
- 5.5 Security Management of Disused Radioactive Sources
- 5.8 Security of Radioactive Sources Used in Industrial Radiation Processing
- WINS Special Report Series Considerations for the Adoption of Alternative Technologies to Replace High Activity Radioactive Sources

IIA

- A comparison of gamma, Eb, X-ray and EO Technologies for the industrial sterilisation of medical devices and healthcare products.