IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Regional Workshop on Regulatory Aspects of Industrial and Research Applications of Radiotracers, Sealed Sources and Nucleonic Control Systems

Hosted by

The Government of Armenia

Through the

Armenian Nuclear Regulatory Authority

Yerevan, Armenia

7-9 October 2025

Ref. No.: **ME-RER1023-EVT2503942**

Information Sheet

Purpose

The purpose of this workshop is to strengthen the understanding of regulatory requirements among organizations and professionals involved in the use of radiotracers, sealed sources and nucleonic control systems in industrial and research applications. The workshop will provide users with practical guidance on how to engage effectively with national regulatory authorities and comply with relevant legal and safety obligations. It will also promote dialogue between users and regulators, encouraging collaboration to ensure that applications are carried out safely, securely, and sustainably.

Deadline for Nominations

Nominations received after **24 August 2025** will not be considered.

Working Language

The working language of the event will be English.

Background

Radiotracer techniques, sealed radioactive sources, and nucleonic control systems play a critical role in a wide range of industrial and research applications. Radiotracers are used extensively in industries such as petrochemicals, mining processing, wastewater treatment, and environmental studies to diagnose process inefficiencies, detect leaks, and study flow dynamics. Similarly, nucleonic gauges and control systems are widely used for process control in industries including cement production, paper manufacturing, and food processing.

While these technologies deliver significant technical and economic benefits, their use involves the handling of radioactive materials, requiring comprehensive regulatory control to ensure their safe and secure application. The safe management of sealed sources—including their authorization, transport, storage, and eventual disposal—is of particular importance to avoid potential safety, security, and environmental risks. In many Member States, regulatory frameworks for the use of radioactive sources in medicine and research are well established. However, the regulatory oversight of industrial and research applications, particularly radiotracers and nucleonic control systems, is often comparatively less developed. This can result in challenges related to licensing and safety assessments. To address these challenges, the workshop aims to highlight the applications of radiotracers, sealed sources, and nucleonic control systems in industrial and research settings, while emphasizing the related safety and regulatory considerations, with the goal of encouraging and promoting their wider adoption.

Scope and Nature

The 3-day workshop will consist of lectures and break-out sessions.

The lectures will include the following:

- Overview of radiotracer techniques, sealed sources and nucleonic control systems and their applications including case studies from member states.
- Regulatory framework and requirements for authorization.
- Safety and security considerations in the use of sealed sources.
- Coordination among regulatory bodies, industries, and research institutions.

Participation

Participation is limited to a maximum of two representatives from each participating Member State. Eligible participants include staff from nuclear regulatory authorities involved in authorization and inspection, as well as scientists and engineers from research institutions and industries that use radiotracers, sealed radioactive sources and nucleonic control systems.

Participant’s Qualification and Experience

The participants must be from nuclear institutions engaged in radiotracer and sealed source applications and participating in the regional project RER 1023 and have basic knowledge on radioisotope applications in industry and environment. Participants should have a minimum qualification of the equivalence of a higher national diploma in chemical engineering, environmental engineering, petroleum engineering, nuclear engineering, physics, or nuclear sciences, and applied mathematics. As this training course will be conducted in English, participants must be proficient in English language.

Occupational Exposure to Radiation

This event will not involve occupational exposure to radiation.

Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (https://intouchplus.iaea.org) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (https://websso.iaea.org/IM/UserRegistrationPage.aspx) before proceeding with the event application process below.
2. On the InTouch + platform, the candidate must:
    a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
    b. Search for the relevant technical cooperation event (EVT2503942) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

NOTE: Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the designation deadline provided.

For additional support on how to apply for an event, please refer to the InTouch+ Help page. Any issues or queries related to InTouch+ can be addressed to InTouchPlus.Contact-Point@iaea.org.

Should online application submission not be possible, candidates may download the nomination form for the training course from the IAEA website.

NOTE: A medical certificate signed by a registered medical practitioner dated not more than four months prior to starting date of the event must be submitted by candidates when applying for a) events with a duration exceeding one month, and/or b) all candidates over the age of 65 regardless of the event duration.

Administrative and Financial Arrangements

Nominating authorities will be informed in due course of the names of the candidates who have been selected and will at that time be informed of the procedure to be followed with regard to administrative and financial matters. Selected participants will receive an allowance from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency American Express, or a travel grant, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

Disclaimer of Liability

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

Note for female participants

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant. The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.

IAEA Contacts

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