



Regional Training Course on Ageing Management for Research Reactors (RTCAMRR)

Hosted by

The Government of Uzbekistan

through the

Academy of Sciences of the Republic of Uzbekistan

Tashkent, Uzbekistan

09 - 13 December 2024

Ref. No.: TN-RER1022-2404865

Information Sheet

Introduction

For over six decades, research reactors have played an important role in several fields including basic sciences; the development of nuclear science and technology; the production of radioisotopes for various applications; and the development of human resources and skills in the peaceful applications of nuclear. According to the IAEA Research Reactor Database (RRDB) in July 2024, 226 research reactors were operational in 54 countries, almost half of them are more than 50 years old, and approximately one fifth (20%) are more than 60 years old. Most of the operating research reactors are challenged by the negative impacts of ageing of structures, systems and components (SSCs).

Ageing is a process in which the characteristics of SSCs change with use or time. Ageing management includes engineering, operations and maintenance actions such as detection, monitoring and mitigation of ageing related SSCs degradation. The information collected in the IAEA's Research Reactor Ageing Database (RRADB) and in the Incident Reporting System for Research Reactors (IRSRR) shows that ageing is one of the root causes of many events that have occurred at research reactor facilities.

As a result, many research reactor facilities have established, or are in the process of establishing, a proactive strategy and a systematic programme to manage ageing and mitigate its impact on the safety and availability of the facilities. Overall, there exists a large body of knowledge related to ageing issues within many IAEA Member States. Collecting and sharing this information within the research reactor community helps to improve ageing management programmes (AMPs) by preventing the negative consequences of ageing for the safety, operability and lifetime of research reactors. It can also help operating organizations managing research reactors that have been in an extended shutdown state by ensuring that the required SSCs are maintained in a safe manner, while awaiting a decision to bring these facilities back into operation or proceed with decommissioning.

On the basis of the facts above mentioned, the IAEA is organizing this Regional Training Course on Ageing Management for Research Reactors. The training is based on consideration given by the IAEA publication: **Guidelines for Ageing Management, Modernization and Refurbishment Programmes for a Research Reactor, IAEA Nuclear Energy Series No. NR-G-5.2 [IAEA Preprint, 2023]**, which refers to the requirements established in Safety Standards Series No. SSR-3, (IAEA 2015)] and the accompanying guidance on Ageing Management for Research Reactors, IAEA No. SSG-10 (Rev.1), [IAEA Pre-Print 2023].

Objectives

The objective of the training course is to enhance Member States' capacities in operation and aging management by providing practical guidance on establishing, implementing and improving ageing management, as well as refurbishment and modernization programmes for a research reactor that is planned, under construction, in operation or to resume operations after a temporary or extended shutdown.

Working Language(s)

The working language of the event will be English.

Deadline for Nominations

Nominations received after **22 October 2024** will not be considered.

Training Framework

During the Training Course, the participants will be provided with a proposed methodology, including distinct examples, of how to establish and implement an AMP, and with guidelines for addressing associated challenges, such as old design and obsolete components, and retirement of technical experts in the design, manufacturing, maintenance, and operation of research reactors.

The event will also provide a forum for the participants to exchange information and experience on the development and implementation of ageing management programmes.

Each country represented in the training course is expected to provide a presentation describing the ageing management programme of their research reactor, and will be asked to provide a case report to be included

in the IAEA research reactor ageing database (RRADB)

The previous will assist to focus on practical aspects of the ageing management programmes of the trainees' facilities, aimed at identifying opportunities for upgrades.

Topics:

1. Introduction
2. Factors to be Considered for an Ageing Management Programme
3. Developing an Ageing Management Programme
4. Ageing Management of Structures, Systems and Components
5. Change Management
6. Application of Ageing Programmes
7. Workshop Activities

Target Audience

The regional training course is open to the following Government Parties participating in the regional TC project RER1022 - "*Enhancing Utilization and Safety of Research Reactors*": Albania, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Poland, Portugal, Romania, Russian Federation, Slovakia, Slovenia, Tajikistan, Türkiye, Ukraine and Uzbekistan.

The IAEA will support the cost of **one participant per Member State**. Candidates to be supported by the IAEA should follow below mentioned application procedure.

Participants' Qualifications and Experience

Candidates should be young engineers or technicians from operating organizations involved in the planning, construction, commissioning, or operation of research reactors or from the regulatory body responsible for the regulatory supervision of research reactors. Member States are strongly encouraged to identify suitable women participants.

As the workshop will be conducted in English, participants should have sufficient proficiency to deliver and follow talks and participate in the discussions in this language without difficulty.

Applications failing to clarify compliance to the requirements listed above will be automatically rejected

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. Download and complete the [Designation of Beneficiary and Emergency Contact Form](#), and upload to InTouch+ ('Profile' tab under the personal section) specifying the document name. If already provided, kindly discard this step; and
- c. Search for the relevant technical cooperation event (**EVT2404865**) 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 provided designation deadline.

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 meeting from the IAEA website and submit their applications to their National Authorities. The nomination forms once fully approved can be submitted by e-mail in a PDF format through the official channels via the IAEA Official E-Mail (Official.Mail@iaea.org) with copy to Mr Katukhov (A.Katukhov@iaea.org) and Mr Bru (Y.Bru@iaea.org).

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 candidates over the age of 65 regardless of the event duration.

Occupational Exposure to Radiation

This event may involve occupational exposure to radiation. Therefore, candidates are required to duly complete and return the Occupational Exposure History (OEH) form upon applying for the event. The IAEA will provide selected participants in due course with a dosimeter to monitor their occupational exposure during this event.

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.

Organization and IAEA Contacts

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Subsequent correspondence on scientific matters should be sent to the Programme Management Officer and correspondence on other matters related to the meeting to the Administrative Contact.