IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Training Workshop on Integrated Management Systems for Research Reactors

Virtual Event

21–25 June 2021

Ref. No.: EVT2004105

Information Sheet

Introduction

A management system is a set of interrelated or interacting elements that establishes policies and objectives, and which enables those objectives to be achieved in a safe, efficient and effective manner.

The Specific Safety Requirements publication *Safety of Research Reactors* (IAEA Safety Standards Series No. SSR-3) establishes the requirement: "The operating organization for a research reactor facility shall establish, implement, assess and continuously improve an integrated management system." The Generic Safety Requirements publication *Leadership and Management for Safety* (IAEA Safety Standards Series No. GSR Part 2) requires that "The management system shall integrate its elements, including safety, health, environmental, security, quality, human-and-organizational-factor, societal and economic elements, so that safety is not compromised." and "The management system shall be developed and applied using a graded approach."

IAEA Safety Standards Series No. SSR-3 also requires that the operating organization ensure, through the establishment and use of an integrated management system, that the research reactor is sited, designed, constructed, commissioned, operated, utilized, and decommissioned in a safe manner. The development and implementation of a management system is a basic requirement in order to ensure, in particular:

- Safety of research reactors at all stages and for all activities during their lifetime in order to protect the public, the workers and the environment from undue radiation hazards;
- Compliance with regulatory requirements;

- Proper and safe modification, refurbishment and upgrading;
- Safe and effective utilization of the research reactor facilities, including quality control of products and services delivered; and
- Improved operational performances of the research reactors as well as of maintenance programmes and procedures.

The Safety Guide *Application of the Management System for Facilities and Activities* (IAEA Safety Standards Series No. GS-G-3.1) provides generic guidance to fulfil these requirements, and the Safety Guide *The Management System for Nuclear Installations* (IAEA Safety Standards Series No. GS-G-3.5) provides specific guidance for nuclear installation operating organizations. The above-mentioned safety requirements and safety guidance are also applicable to research reactors, but the application of the management system requirements should be graded to ensure that resources are deployed and appropriate controls are applied using a graded approach with consideration of:

- The significance and complexity of each product, service, activity or control;
- The hazards and the magnitude of the potential impact (risks) associated with the safety, health, environment, security, quality, and economic aspects of each product, service, activity or control; and
- The possible consequences if a product fails or an activity is carried out incorrectly.

For research reactors with a lower power and a limited number of experimental facilities; there are significant differences concerning the controls that need to be performed and the extent of the associated documentation in comparison with those for high-power research reactors with a large number of experimental and radioisotope production facilities. Consequently, the scope, extent and details of the management system should be established and implemented by the operating organization using a graded approach.

Similar Training Workshops were held in Vienna, Austria, in 2014, 2016 and 2019. A fourth Training Workshop on the subject is now again organized virtually.

Objectives

The event is aimed at providing the participating Member States with practical information on the establishment, implementation and continuous development of management systems for research reactors on the basis of the IAEA safety standards. It will also serve as a forum for Member States to share and discuss experiences, good practices, challenges and lessons learned in relation to management systems for research reactors. The use of a graded approach in the application of the requirements for management systems will also be discussed on the basis of the Safety Report entitled *Implementation of a Management System for Operating Organizations of Research Reactors* (Safety Reports Series No. 75).

Target Audience

The event is intended for individuals from Member States with an operating research reactor facility or Member States that have initiated a new research reactor project. Participants should be individuals in charge of developing, implementing and improving management systems at their respective research reactor facilities. Specialists from regulatory bodies who are in charge of the review and assessment of management systems for research reactors can also participate.

Working Language

The working language of the event will be English.

Expected Outputs

Meeting report summarizing the discussions and conclusions.

Topics

The following topics will be addressed and discussed during the event:

- IAEA safety standards dealing with management systems for nuclear facilities and activities;
- Use of a graded approach in the application of management system requirements for research reactors;
- Implementation of management systems for research reactor operating organizations;
- Experience, including practical examples and lessons learned, of the participating Member States in relation to their management systems;
- Monitoring, assessment and continuous improvement of the management system; and
- Regulatory oversight of management systems for research reactor organizations.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **9 April 2021**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than 2 pages (including figures and tables) and should not exceed 400 words. It should be sent electronically to Messrs Ram Sharma, Dario Jinchuk and Hector Cols, the Scientific Secretaries of the event (see contact details below), not later than **9 April 2021**. Authors will be notified of the acceptance of their proposed presentations by **15 May 2021**.

In addition, participants have to submit the abstract together with the **Participation Form (Form A)** and the attached **Form for Submission of a Paper (Form B)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or their organization for onward transmission to the IAEA not later than **9 April 2021.**

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

The countries eligible for TC (Technical Cooperation) assistance which participate in TC projects may submit the request for TC support through their respective National Liaison Officers (NLOs). In this case, TC specific forms to attend the workshop need to be employed. Detailed information and forms are accessible in the following web page:

https://www.iaea.org/services/technical-cooperation-programme/how-to-participate

Department of Technical Cooperation is using InTouch+. Participants can apply and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this facility should write to:

InTouchPlus.Contact-Point@iaea.org.

IAEA Contacts

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries and correspondence on other matters related to the event to the Administrative Secretary.