



Technical Meeting on Probabilistic Safety Assessment for Non-Reactor Nuclear Facilities

Hosted by the
Government of the Kingdom of the Netherlands

through the
NRG Nuclear Research and Consultancy Group

Amsterdam, Kingdom of the Netherlands

9-13 September 2024

Ref. No.: EVT2303841

Information Sheet

Introduction

The IAEA General Safety Requirements on Safety Assessment for Facilities and Activities, GSR Part 4 (Rev. 1) states that safety assessment needs to be undertaken as a means of evaluating compliance with safety requirements for all facilities, which is intended to determine the measures that need to be taken to ensure safety. GSR Part 4 (Rev.1) also outlines the role of probabilistic methods in allowing analysts to determine all significant contributing factors to the radiation risks arising from a facility.

Probabilistic safety assessment (PSA) is widely used for the safety assessment of nuclear power plants (NPPs) and research reactor facilities and often, the insights from PSA serve as the basis of the safety related decision making for various stakeholders (e.g. regulators, operating organisations). The overall PSA methodology, specific risk metrics and the techniques for the implementation of the various PSA tasks are very well developed for these facilities and well covered in IAEA publications such as Safety Standards

SSG-3 (Level 1 PSA) and SSG-4 (Level 2 PSA), TECDOC-1804 (quality attributes for PSA), Safety Report No107 (PSA for research reactors) and others.

In parallel, PSA approaches can also be applied to non-reactor nuclear facilities (e.g. spent fuel storage, enrichment, fuel fabrication, fuel reprocessing and radioactive waste facilities). This is done using a graded approach and often utilizing simplified risk assessment techniques (both quantitative and qualitative). Application of traditional PSA approaches for non-reactor nuclear facilities has its own challenges (e.g. different risk metrics, applicability of human reliability analysis data, availability of reliability data, failure modes and lists of potential initiating events). Also, unlike for NPP and research reactor PSAs, the experience of PSA for non-reactors is limited and not harmonised.

In this context it is important to foster the exchange of information on approaches, challenges and specific experiences regarding the wide range of aspects of risk assessment for non-reactor nuclear facilities (using probabilistic, and other risk analysis techniques). This will allow for better understanding of the current status and discussion of the needs and future actions in this area.

Objectives

The objective of the event is to provide the platform for discussions on experiences regarding the wide range of aspects of risk assessment for non-reactor nuclear facilities (using probabilistic and other risk analysis techniques).

Special emphasis will be given to the existing experiences and best practices in this area and understanding the limitations of using traditional, well established PSA methods for these facilities. In cases where the experience with application of risk assessment techniques is limited, detailed information on safety demonstration and methods used for the safety case of non-reactor nuclear facilities are expected to be presented and discussed.

Target Audience

The nominees for the technical meeting should be representatives of regulatory bodies, operating organizations, design organizations, technical support organizations, research or governmental institutes and industry, that are actively involved in safety demonstration for non-reactor nuclear facilities. The participants should have a background in safety demonstration for non-reactor nuclear facilities, using probabilistic approaches or other methods. Participants in the technical meeting will be invited to present their national experiences and approaches used in the event subject areas.

Working Language

The working language of this event will be English.

Expected Outputs

Participants will exchange experiences in safety demonstration of non-reactor nuclear facilities using probabilistic approaches or other methods. It is expected that the participants will discuss the current experiences in the area of risk assessment for non-reactor nuclear facilities and will outline the challenges and needs in this area. The scope of a potential technical publication in this area will be discussed and tailored based on the needs in this area.

Structure

The technical meeting will consist of presentations given by IAEA staff and invited experts, as well as national presentations provided by meeting participants. In addition, it is planned to organize working sessions with lively interaction among participants to support the expected outcomes of the technical meeting.

National presentations and technical discussions on available national experiences and current challenges in the topical area of the event are specifically encouraged. In cases when the national experience with application of probabilistic techniques is limited, detailed information on safety demonstration and methods used for the safety case of non-reactor nuclear facilities is expected to be presented and discussed.

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 **14 June 2024**. 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.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **14 June 2024**.

Visas

Participants who require a visa to enter the Kingdom of the Netherlands should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of the Kingdom of the Netherlands.

IAEA Contacts

Scientific Secretaries

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

Participation Form

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To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary, Mr Shahen Poghosyan, Division of Nuclear Installation Safety, Department of Nuclear Safety and Security (Email: S.Poghosyan@iaea.org) and to the Administrative Secretary, Ms Michaela Milanovic Bujnova, (Email: M.Milanovic-Bujnova@iaea.org).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 14 June 2024

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
Do you intend to make a presentation? Yes <input type="checkbox"/> No <input type="checkbox"/>		
If yes, then please provide the title:		

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate.