Revision of 2 interrelated Specific Safety Guides on Research Reactors as a set of publications – DS510

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Background

• All safety guides for research reactors need to be revised to account for:
  – the recently published SSR-3:
    • New requirements (e.g. addressing relevant feedback from the Fukushima Accident);
    • Inclusion of subcritical assemblies;
    • Interface between nuclear safety and security.
  – feedback from the use of the document by MSs
  – operating experience feedback from the IAEA Incident reporting system for research reactors (IRSRR)
  – experience gained from INSARR missions
Background

- The approach to revising the safety guides was developed in consultation with experts from MSs (CSM), and was discussed and agreed within NSNI and NS.

- The approach was based on assessment of the new requirements in SSR-3 and a gap analysis of the scope and content of the Guides.

- The outcome was to revise the guides in three groups according to the depth of revisions needed (efforts of MSs also considered), and extent of technical interlinkages as well as experience from the revision by amendment of safety guides for NPPs:
  - Group 1: 8 guides (Operational Aspects) DS509
  - Group 2: 2 guides (Safety assessment, utilization and modification: SSG-20 and SSG-24) DS510 - this DPP
  - Group 3: SSG-22 (Graded Approach) DS511
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- The documents were first published in 2012 before SSR-3 was published:
Justification

New requirements in SSR-3 include:
• Subcritical assemblies
• Preparation for Decommissioning
• Interfaces between safety and security

Gap Analysis (examples – detailed list included in the DPP):
• Req. 22, Design Extension Conditions;
• Req. 55, Emergency Response Facilities on the Site;
• Req. 76, Material Conditions and Housekeeping;
• Req. 88, Feedback of operating experience; and
• Req. 90, Interfaces between nuclear safety and nuclear security.

In addition:
– requirements related to management for safety and verification of safety, site evaluation, general design requirements, treatment of accident conditions, safety analysis and defence-in-depth were significantly modified.
– information in NS-R-4 was not carried over to SSR-3 because it was more suitable for inclusion in Guide-level publications.
Overview of document contents

• The scope of the 2 safety guides remains essentially unchanged;

• The structure of the 2 safety guides will also remain essentially unchanged.
Status of the Document

• The draft DPP was reviewed internally according to the NSNI QA procedure, and approved by the Coordination Committees in 2017

• Submitted to the NUSSC/RASSC/WASSC/TRANSC/EPReSC Committees for approval and clearance by NSGC to submit to the CSS

• No comments received from RASSC/WASSC

• Approved by EPReSC, November 2017
Requested Action

Approval to submit DS510 to the CSS.
Thank you!