IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Commission on Safety Standards

End of Term Report -9th Term
Nuclear Safety Standards Committee
Agenda item 3.2

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9th term of NUSSC (2021-2023)

- 57 MS and 8 international organizations
- 6 biannual meetings
  - Two joint meetings (NSGC; NSGC and EPReSC)
- 1 extraordinary meeting – virtual
- 8 draft safety standards approved for submission to CSS for endorsement to publish
- 11 draft safety standards approved for MS review
- 17 DPPs approved for drafting

NUSSC Led Draft Safety Standards (1/2)

S.No.	Type	No.	Title	New/ Revision
1	SG	DS513	Leadership, Management and Culture for Safety	Revision of GS-G-3.1
2	SG	DS518a	Safety of Reprocessing facilities	Revision of SSG-42
3	SG	DS518b	Safety of Fuel cycle Research and Development Facilities	Revision of SSG-43
4	SG	DS524	Radiation Protection Aspects of Design for Nuclear Power Plants	NS-G-1.13
5	SG	DS525	Chemistry Programme for Water Cooled Nuclear Power Plants	Revision of SSG-13
6	SG	DS528	Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants	Revision of SSG-4
7	SG	DS529	Investigation of Site Characteristics and Evaluation of Radiation Risks to the Public and the Environment in Site Evaluation for Nuclear Installation	Revision of NS-G-3.2

NUSSC Led Draft Safety Standards (2/2)

S.No	Type	No.	Title	New/ Revision
8	SG	DS531	Geotechnical Aspects in Siting and Design of Nuclear Installations	Revision of NS-G-3.6
9	**SR**	DS532	Safety of Nuclear Power Plants: Commissioning and Operation	Revision of SSR-2/2 (Rev.1)
10	SG	DS535	Periodic Safety Review of Nuclear Power Plants	Revision of SSG-25
11	SG	DS537	Safety demonstration of innovative technology in power reactor designs	New
12	SG	DS539	Licensing Process for Nuclear Installations	Revision of SSG-12
13	SG	DS541	Assessment of Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Installations	Revision of SSG-18
14	SG	DS547	Regulatory Experience Feedback Management	New
15	SG	DS552	Safety Evaluation of Nuclear Installations for External Events Excluding Earthquakes	New

NUSSC Led Safety Standards Published in 2024

SSG-3
Development and Application of Level 1 PSA for NPPs, 2024, Rev. 1, 2024

SSG - 88
Design Extension Conditions and the Concept of Practical Elimination in the Design of Nuclear Power Plants, 2024

SSG - 89
Evaluation of Seismic Safety for Existing Nuclear Installations, 2024

SSG-90
Radiation Protection Aspects of Design for NPPs, 2024

Recommended Priorities for 10th term

- Maintain DS513 ‘Leadership, Management and Culture for Safety’ as the top priority
- Re-consider GS-G-3.5 ‘The Management System for Nuclear Installations’
  - Should its content be made more appropriate for a Safety Guide or should it be replaced by another type of publication more relevant for embarking Member States?
  - Comparable to GSG-12 ‘Organization, Management and Staffing of the Regulatory Body for Safety’ and GSG-13 ‘Functions and Processes of the Regulatory Body for Safety’ but for the operators.
- Support CSS as it moves to establishing Long-Term Structure and Plan

Recommended Priorities for 10th term

- Anticipate the need to revise Safety Standards in order to verify the safety of evolutionary or innovative designs that may be proposed, such as for SMRs and floating NPPs, for which Member States lack operating experience.
- Pursue means to improve program management, in order to avoid delays such as those encountered during the 9th Term.

Recommended Priorities for 10th term

- Continue to pay attention to the work being done under the NHSI Regulatory Track, that intends to produce TECDOCs that may impact on processes for regulatory cooperation and eventually on Safety Standards.

- Review the structure of the Safety Standards and the Nuclear Security Series documents with a view to seeking more consistency in the longer term.

- Continue to seek ways to work more closely with NSGC and the other Safety Standards Committees on matters of common interest, such as SMRs (also including Safeguards-by-design)

Recommended Priorities for 10th term

- Continue to remain aware of the lower-level informational documents that are being prepared by the Secretariat (such as TECDOCs and Safety Reports)
- Consider whether other approaches may help clarify Site Evaluation and Selection for embarking Member States.

NUSSC Inputs for Long Term Plan

- NCSFIs (Prevention, detection and management of Non-conforming, Counterfeit, Suspect or Fraudulent Items);
- Passive systems (Validation, Testing, demonstration of functionality in-service, etc);
- Guidance on use of DSA/PSA for passive safety systems in safety assessment;
- Following completion of DS513, Specific Safety Guides for management, leadership, and culture for different types of nuclear installation may be needed;
- Extension of current analytical codes to innovative designs in the absence of experimental validation/development of improved codes;
- Guidance on factoring transportability considerations into the design of nuclear power plants;

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Thank you!