Nuclear Safety Standards Committee

43rd Meeting, 20 – 22 June, 2017

Agenda item 3.4

DPP DS507 - Draft Safety Guide: Seismic Hazards in Site Evaluation for Nuclear Installations

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External Events Safety Section / NSNI
The document (SSG-9) was first published in 2010.

The current revision (DS 507) was initiated to:

- Ensure consistency with applicable requirements for site evaluation (NS-R-3 Rev.1/DS484)
- Ensure coherency and consistency with the other relevant IAEA Safety Standards (e.g. SF-1, SSR-2/1, GSR Part 2 and 4),
- Incorporate the lessons learned and address challenges highlighted IAEA Report on Fukushima-Daiichi NPP Accident.
Overview of the Document

- The scope and table of contents will follow SSG-9
- New information in DS507 includes
  - Newly developed methods of data collection
  - Addressing issues related to multi-unit sites (consistent with DS484)
  - Guidance on hazard/design interface with site response.
- Other Changes
  - More detail of capable faults and fault displacement hazard analysis for new and existing nuclear installations
  - Combination of seismic hazards (surface faulting and ground motion) and relevant geological, hydrological and geotechnical hazards.
Implications arising from the Fukushima Daiichi NPP Accident

- highlighted issues of uncertainties in the assessment of seismic hazards
- natural hazard assessment has to be sufficiently conservative
- historical data in the establishment of the design basis of nuclear power plants is not sufficient to characterize the risks of extreme natural hazards
- re-evaluated on a periodic basis to consider advances in knowledge, and necessary corrective actions or compensatory measures
NUSSC Member Comments: Summary

- Comments from Germany, France, Belgium, Czech Republic and Japan.

- All comments were addressed and resolutions published on NUSSC/WASS web page:
  - 10 accepted or accepted with modifications
  - Rejected 3 (e.g. Out of scope of NI)

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Requested Action

Approval by NUSSC to send the DPP to CSS for approval.
Thank you!