Nuclear Safety Standards Committee

46th Meeting, 26 – 28 November, 2018

Agenda item 2.5

SEISMIC DESIGN OF NUCLEAR INSTALLATIONS
Draft Safety Guide DS490

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Division of Nuclear Installation Safety
The document (NS-G-1.6) was first published in 2003
DS490 SEISMIC DESIGN OF NUCLEAR INSTALLATIONS

• The current revision (DS-490) was initiated to:
  – incorporate developments related to seismic design and qualification since the publication of NS-G-1.6 in 2003;
  – extend the scope to nuclear installations
  – ensure consistency with the current applicable requirements from SSR-2/1, SSR-3 and SSR-4.
  – provide updated guidance for seismic categorization based on safety classification;
  – provide updated guidance for development of seismic design basis ground motion;
  – provide updated guidance for selection of the seismic design and qualification codes and standards;
  – provide updated guidance for seismic analysis and seismic soil structure interaction;
  – provide updated guidance for seismic qualification
  – provide updated guidance for using graded approach
Implications of the accident in Fukushima Daiichi NPP

- Consideration of uncertainties in development of Design Basis Earthquake and Beyond Design Basis Earthquake.
- Provide updated guidance for assessing if seismic margins is adequate in response to Requirement 17, Paragraph 5.21 and 5.21a of SSR 2/1.
- Provide updated guidance concerning seismic instrumentation and response to a seismic event.
- Consideration of good engineering practice and operating experience (based on observed past seismic performance of nuclear and industrial installations affected by earthquakes).
Status of the Document

- The DPP was approved by SSCs in November 2014 and by the CSS in April 2015.
- The first draft was developed in 3 Consultancy Meetings:
- The draft is now in Step 7.
NUSSC Member Comments: Summary

We received 182 comments and 4 clarification requests from: Egypt, Finland, France, Germany, India, Japan, Korea, Sweden, Switzerland, Ukraine, USA, ENISS and WNA

- All comments were addressed
- There are no unresolved comments.
Summary of Comments Resolution

- Accepted: 65%
- Rejected: 2%
- Clarifications: 33%
Requested Action

Approval by NUSSC for sending DS490 to MS for comments
Thank you!
NUSSC Member Comments: Summary

Summary of Comments Resolution

- Accepted: 70%
- Rejected: 3%
- Clarifications: 27%
## NUSSC Member Comments: Summary

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