Review of the Safety Guide on “Deterministic Safety Analysis for NPPs” (DS491)

Technical Content approved by NUSSC in June 2017
Technical Editorial review completed in October 2017: Draft posted in website 3 November

Resolutions to comments provided by France to NUSSC44 (20 November 2017)

24 November 2017

COMMENTS BY REVIEWER Country/Organization: FRANCE Date: 20 / 11 / 2017 pages				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection

COMMENTS BY REVIEWER Country/Organization: FRANCE Date: 20 / 11 / 2017 pages				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	2.5 Line 4	"… Three categories of criteria can be recognized: (a) Safety criteria: these are criteria that relate either directly to the ~~**radiological**~~ consequences of operational states or accident conditions, or to the integrity of barriers against releases of radioactive material;	Safety criteria should also consider the maintenance of safety function. The current version focuses only on radiological consequences. Thus it is proposed to come back to the previous meaning validated by NUSSC.		*This bullet will be complemented as follows:* "(a) Safety criteria: these are criteria that relate either directly to the radiological consequences of operational states or accident conditions, or to the integrity of barriers against releases of radioactive material, with due consideration given to maintaining the safety functions;"		*1) Final objective of nuclear safety is to protect people and the environment from harmful effects of radiations.* *2) Consistency with the scope of the Safety Standards (e.g. SSR-2/1 para 1.7(d)).* *3) Radiological consequences does not only mean consequences related to actual radiation exposure, but also to potential exposure, i.e. preventing accidents and maintaining the safety functions.* *4) To use only "consequences" would not be clear enough.*
2.	2.18	(g) to support the design of safety features ~~**and safety systems**~~ for the mitigation of the consequences of severe accidents	According to IAEA safety glossary, safety systems is only for AOO and DBA	X	*The change might contribute to avoid confusion*		

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3.	3.40	3.40. A **deterministic** list of design extension conditions without significant fuel degradation should be developed. The relevant design extension conditions should include:	The term "deterministic" has been deleted by editorial review: this modification is not an editorial change. Moreover, the list below is mainly deterministic. Thus "deterministic" should be maintained		*Para 3.40 will be modified as follows:* "3.40. A deterministically derived list of design extension conditions without significant fuel degradation …"		*1) See subsection on "Postulated Initiating Events (paras 3.11-3.22), and para. 3.37.* *2) 'Deterministic' is not an appropriate attribute for the noun 'list'.*
4.	5.24	5.24. For complex **analysis** ~~**codes**~~, the validation should be performed in two phases: the development phase, in which the **assessment** ~~**validation**~~ is performed by the code developer, and the independent assessment phase, in which the **assessment** ~~**validation**~~ is performed by the code user. **Both phases are recommended for validation.**	Editorial review has replaced "assessment" by "validation" and "analysis" by "codes". It is not only editorial modification and the meaning could be challenged. The initial wording should be maintained		*This para will be modified as follows:* 5.24. The validation of the codes used in ~~For~~ complex analysis ~~codes the validation~~ should be performed in two phases: the development phase, in which the assessment ~~validation~~ is performed by the code developer, and the independent assessment phase, in which the assessment ~~validation~~ is performed by the code user.		*The last sentence suggested would be redundant.*