

**DPP 497 Revision of eight closely interrelated Safety Guides: NS-G-2.2 to 2.8 and NS-G-2.14 DPP 497 Revision of eight closely interrelated Safety Guides: NS-G-2.2 to 2.8 and NS-G-2.14 Japan NUSSC Comments on DPP DS497 “Nuclear Power Plants Operation”**

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: <b>A: Japan</b> NUSSC member		Page.1 of 1					
Country/Organization: Japan NRA		Date: 23 May, 2016					
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modif./rejection
1.	General	<p>This revision is quite challenging but it could be a best practice as a pilot project for revising all of safety guides in coping with safety requirements.</p> <p>Therefore, it is suggesting that the common elements among these 8 guides should be consolidated in advance as a first step on the way from step 1 to step 2 in the proposed schedule effectively.</p>	Clarification for the scope of the DPP.	x	This will be done during the first CS planned for this activity		
2.	§4/Step 1 2 <sup>nd</sup> and 3 <sup>rd</sup> bullets	<p>The following revisions of two guides should be done instead of introducing new safety guide.</p> <ul style="list-style-type: none"> <li>Full revision of NS-G-2.1 “Fire Safety in the Operation of NPPs” to cover all hazards in NPP operation in line with SSR-2/2 (Rev. 1) requirements and recommendations of Vienna Declaration on Nuclear Safety.</li> <li><del>New guide on “Monitoring and review of safety performance in Operation of NPP” in line with SSR 2/2 Requirements 8&amp;9 and recommendations of Vienna Declaration on Nuclear Safety (DPP for DSyyy is being prepared).</del></li> <li>Full revision of NS-G-2.14 “Conduct of Operations at NPP” including “Monitoring and review of safety performance in Operation of NPP” in line with</li> </ul>	Consolidation for two new safety guides in an effective way.		<p>1) The review of NS-G-2.1 showed that significant redrafting will be needed for which a special group of experts will be needed and therefore it was suggested to manage it under different DPP, however the link of the two revision processes will be maintained as suggested by Japan to ensure consistency.</p> <p>2) What is proposed by Japan is acceptable and will be considered during the second stage of the revision of the SS in NPP operational domain. At this</p>		

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Reviewer: <b>A: Japan</b> NUSSC member		Page.1 of 1					
Country/Organization: Japan NRA		Date: 23 May, 2016					
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		<p>recommendations of Vienna Declaration on Nuclear Safety.</p> <p>Therefore, total number of guides to be revised by this DPP will be nine.</p>			<p>stage it was considered that SSR 2/2 Requirements 8&amp;9, need to be supported by significant guidance that can give practical suggestions how to implement Requirements 8&amp;9. A new DPP with more details for NUSSC consideration and decision is being developed for the next NUSSC meeting..</p>		

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: M. de Vos Page. 1 of 1 Country/Organization: <b>B: Canada</b> /Canadian Nuclear Safety Commission Date: May 19, 2016							
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	Section 3	<p>Please add a single bullet to existing opening list “Most of the eight Guides subject to this DPP are outdated and therefore would benefit from amendments to take into consideration.”</p> <ul style="list-style-type: none"> <li>Potential use of these documents for new types of reactor technologies (e.g. Small Modular Reactors and Non-Water Cooled reactors).</li> </ul>	<p>This request is not requesting significant additions to the documents, but rather, recognition that these documents will apply when considering the use of these new technologies. This will further encourage the use of these guides by, for example, embarking member states considering such technologies.</p>	x			

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: C : U.S. Nuclear Regulatory Commission Country/Organization: USA				Date: 05/23/2016			
Comment No. / Reviewer	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Objective ; Page 3	The scope should also address integration and harmonization with IAEA Emergency Preparedness and Response Committee (EPreSC) standards and documents. Add a Bullet Under Objective, Step 1; o <b>Integration and harmonization with EPreSC.</b>	EPreSC Committee has been recently established and several new documents pertaining to nuclear power plants operation and termination of emergency situation are directly related to the eight safety guides under consideration for revision.		This comment is equally valid for many other documents developed under the lead of WASSC and RASSC. Consistency with all such relevant guides will be ensured during the revision of the safety guides subject to current DPP. The new software developed by the IAEA to support revision process makes easy to define the existing links between different guides. Comment is included under chapter 5.		
2	Page 3, Scope, Step 1, bullet 2	Replace “Systemic” with “Systematic”	Incorrect word		Systemic approach to safety is a concept developed in the new revision of GSR Part 2, Req 12, 5.2 and NPP operational Safety guides will make only reference to this concept.		
3	Page 4 Bullet 2	Risk-informed approaches to support operational safety of NPPs, <b>including under shutdown conditions.</b>	Risk can be higher under shutdown conditions than in operations because fewer backup systems are	x			

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: C : U.S. Nuclear Regulatory Commission Country/Organization: USA				Date: 05/23/2016			
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			available, and barriers may be disabled.				
4	Page 4 Bullet 4	Safety for outages, <b>including management of risk.</b>	Risk can be higher during outages because fewer backup systems are available and barriers may be disabled.	x			
5	Page 4, NS-G-2.2	Add Requirement XX – To include criteria for Steam Generator tube leakage monitoring that allows for early detection and trending of leakage	As shown by U.S. operational experience, early detection, in accordance with the EPRI Steam Generator Program guidance, is essential to ensuring prevention of SG tube failures.	x			
6	Page 5, NS-G-2.5, Bullet 2, line 3	“...severe accident management guideline, design extension conditions <b>and application of the concept “practically eliminate,...</b> ”	Management and analyses to prevent large or early release from spent fuel pools need to be well defined.		Application of concept “Practically eliminated” will be considered to the extent possible and applicable for all NPP operational guides, as soon as it will be clarified for the guides in NPP Design domain.		

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: C : U.S. Nuclear Regulatory Commission Country/Organization: USA				Date: 05/23/2016			
Comment No. / Reviewer	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
7	Page 5, NS-G-2.6	Bullet 1, Requirement 13 – To address adequately Equipment Qualification, <b>including realistic performance targets under DEC conditions:</b>	DEC equipment is analyzed and procured based on realistic conditions, whereas equipment for design basis events is based on bounding conditions.	x			
8	Page 5, NS-G-2.6	Add bullet – To ensure that the cumulative effects of deficiencies on non-safety related systems, does not impact functions important to safety	U.S. Operational experience within the last 5 years has shown that deferred maintenance activities on non-safety related SSCs, may cause plant transients that could challenge fission product barriers.	x			
9	Page 6, NS-G-2.7	Add a new bullet: ○ Ensure consistency with SSR-5; GSR Part 6, and GSG-1.	NS-G-2.7 (e.g.; Radioactive waste Management in the Operation of NPPs) should also be consistent with safety requirements for disposal of	x			

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: <b>C : U.S. Nuclear Regulatory Commission</b> Country/Organization: <b>USA</b> Date: <b>05/23/2016</b>							
Comment No. / Reviewer	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
			radioactive waste, decommissioning, and waste classification system. These areas are significant to consider and plan for during operation.				
10	Page 6, NS-G-2.7	Add new bullets: <ul style="list-style-type: none"> <li>Environmental monitoring and waste minimization.</li> <li>Regulatory Control of Radioactive Discharges to the Environment (revision of WS-G-2.3);</li> <li>Predisposal Management of Radioactive Waste from Nuclear Power Plants and Research Reactors (revision of WS-G-2.5)</li> </ul>	NS-G-2.7 revision should also address new guides being developed, involving environmental monitoring, waste minimization, predisposal management (e.g.; DS448), and radioactive discharges during operation of NPPs.	x			
11	Page 6, NS-G-2.14	Bullet 3, Requirement 13 – To address adequately Equipment Qualification, <b>including realistic performance targets under DEC conditions:</b>	DEC equipment is analyzed and procured based on realistic conditions, whereas equipment	x			

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: C : U.S. Nuclear Regulatory Commission Country/Organization: USA				Date: 05/23/2016			
Comment No. / Reviewer	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
			for design basis events is based on bounding conditions.				
12	Page 9, Chap. 6	Spell out abbreviations: RAS, SAS, IEC, NSRW, and NSNS.	Edit/Clarity	x			
13	Page 10, Chap. 7., Part 1.	Add new bullet: 1.26 Quality Assurance program	As noted in 5. Scope, part 1, last bullet, Quality Assurance needs to be addressed consistently throughout the documents, as it applies throughout commissioning and plant operation.		Within the latest revision of IAEA standards (GRS Part 2, GS-G-3.3) Guidance on Quality assurance is considered under the Integrated Management Systems ( for SSR 2/2 this will be covered under guidance for meeting R3.4-3.7).		
14	Page 10, Last line, 3.9	Modify to read: Preparation <del>for</del> and Transitioning into decommissioning.	The proper term of use is “Transitioning into Decommissioning.” This may include actions and implementation aspects, not only preparation.	x			
15	Page 10, last line,	Add a new item: 3.10 Preparation for radioactive waste (RW) predisposal	Completeness to address preparation	x			



COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: <b>C : U.S. Nuclear Regulatory Commission</b>							
Country/Organization: USA				Date: 05/23/2016			
Comment No. / Reviewer	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	new 3.10	and spent fuel (SF) managements.	for RW and SF management.				

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: <b>D: ENISS</b> Page.1 of 1 Country/Organization: ENISS 20.05.2016				Date:			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	General	<p>The proposed approach introduces considerable workload to all participated parties and might imply discussions on topics to be repeated twice (first in step 1 when revising/creating guides and again in step 2, when merging them together) – especially for the new guide to be created, the effort will increase considerably (first create a new guide – 14 Steps according to SPESS- and directly after finalization combine it with the other guides in step 2).</p> <p>IAEA should check if it might therefore be advantageous to combine step 1 and 2 and to include all work directly in the establishment of the new guide with three volumes.</p> <p>This may induce a much reduced workload on all parties, as the revision of the guides, the full revision of NS-G-2.1 and the creating of a new guide on safety performance can be saved.</p>			<p>The Secretariat proposal is to have a hold point after completion of the revision of the 8 safety guides. The revision of the guides will be done in a “revision mode”, to minimize efforts from SSC for control of this revision. During the hold point presentations will be given to SSC giving them two options:</p> <ol style="list-style-type: none"> <li>1) to proceed with review and approval of the Committees and publication of each of the 8 guides, revised NS-G-2.1 and new guide on safety performance</li> <li>2) to agree/modify the Secretariat proposal for restructuring of all relevant guides on NPP Operation and proceed with review and publication as will be requested by the SSC.</li> </ol> <p>It is clear that efforts for such a work will not be negligible, however after careful</p>		

				consideration the Secretariat is proposing this as most optimal way. Clearly revision and restructuring of guides at one and the same time will not be possible due to the complicated nature of such a task and lack of clarity on the status of some of the other safety guides that are under revision currently. It is also important that the SSC agreed in general on the substance of revision before the Secretariat starts the restructuring.		
2.	4. Objective 5. Scope	ENISS appreciates that IAEA has decided to use one DPP for the revision of nine Safety Guides in an adequate and challenging time frame.  However, the objective (chapter 4) states, that a two-step approach is proposed, which is repeated in chapter 5. It is not clear to see how the schedule of step 1 and the schedule from step 2 fits in the production schedule in chapter 8. From ENISS point of view the existing schedule is focused to the first bullet of step 1. It should be clarified, what exactly is intended with the DPP.	x	See above clarification		

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Marcus Gustavsson, Anders Hallman		Page 1 of 2					
Country/Organization: E: Sweden/SSM		Date: May					
23, 2016							
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Section 5	NS-G-2.6, Requirement 13 EQ – It is important to clarify the importance of and connection to design and construction of the SSC:s in relation to tasks needed during operation.		x			
2	Section 5	NS-G-2.6, Guidance on trending analysis – This part should discuss choosing right parameters, on-line surveillance, diagnostics, acceptance criteria etc. There is also a close connection to review of effectiveness of MSI-tasks and experience feedback.		x			
3	Section 5	NS-G-2.6 - Considering the comment above, there is a point in keeping the parts of Chapter 6 that are closely connected to MSI-tasks e.g. 6.1-6.10, 6.12-6.13.			The information provided by this comment will be addressed during the drafting phase		
4	Section 5	NS-G-2.6, Guidance on functional tests – This could include a connection to “testing after modification” in NS-G-2.3, especially since the border between maintenance and modification is not always clear.		X			
5	Section 5	NS-G-2.6 - The guide could benefit from more guidance regarding obsolete equipment.			This subject will be addressed after the completion of revision of NS-G-2.12 ( DS 489) on Aging Management for NPP		
6	Section 5	NS-G-2.6 - The guide could include a chapter describing the relationship between MSI-programmes and other closely related programmes e.g. AMP, FMM, Chemistry, etc.			The suggested interrelation amongst different operational programmes will be addressed as appropriate in all guides		

7	Section 5	NS-G-2.8 - This guide (or where suitable) could include guidance regarding keeping nuclear competence, both within the organization of licensees and on national or international level. This includes both how to keep/transfer competence from older generations of experienced personnel and how to make sure new personnel have a suitable level of competence when employed.		x			
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COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Catherine Organo Page 1 of 1 Country/Organization: <b>F: IRELAND</b> / Environmental Protection Agency Date: 24 May 2016							
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Section 3/para. 5	What is DiD?		x	Defence in Depth		
2	Section 5	NS-G-2.4: suggest adding a specific reference to NST041 'Preventive and protective measures against insider threats' into fourth bullet point (Req. 17 ...).		x			
3	Section 5	NS-G-2.8: suggest adding a reference to NST041 'Preventive and protective measures against insider threats' into second bullet point ('To include more guidance on training concerning explicitly security/safety interactions').		x			
4	Section 5	NS-G-2.14: suggest adding a specific reference to NST041 'Preventive and protective measures against insider threats' into fourth bullet point (Req. 17 ... ).		x			

COMMENTS BY REVIEWER					RESOLUTION			
Reviewer: <b>Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)</b> (with comments of GRS)								
Page 1 of 3								
Country/Organization: <b>G: Germany</b>								
Date: 2016-05-19								
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
2	1	Chapter 3, Para 2 (page 3)	<p>“Amendments of the relevant Safety Guides are needed in the following areas:</p> <p>1. There are several requirements in SSR- 2/2 Rev 1 which are not yet adequately addressed in the Safety Guides – this will include ... Requirement 28 Material conditions and housekeeping (as concerns <b>FME</b> <a href="#">foreign material exclusion</a>); ...”</p>	The abbreviation ‘FME’ should be explained here because it is not introduced elsewhere in the DPP. It is assumed that not all SSC members are familiar with this concept.	x			
3	2	Chapter 3, Para 2 (page 3)	<p>“Amendments of the relevant Safety Guides are needed in the following areas:</p> <p>... 4. ... It should be taken into consideration that the requirements for regulator’s involvement in operations activities have been formulated in the IAEA Safety Standards publications GSR Parts 1 – 4. The <del>guides for these activities are introduced</del> <a href="#">recommendations on how to meet these requirements are provided</a> in the appropriate safety guides GS-G-1.2 <a href="#">to GS-G-1.4</a>. ...”</p>	Clarification aiming to avoid circular wording (“guides ... are introduced in ... guides”). Editorial.	x			
2	3	Chapter	2 <sup>nd</sup> bullet:	The revised NS-G-	x			

		r 5, Para on NS-G-2.2 (page 4)	“Requirement 26 – To consider Operating Procedures for all plant states and make the Guide consistent with <a href="#">the revision of NS-G-2.15 (DS483)</a> . Operator aids should be considered under section 8.”	2.2 has to be made consistent with the revision of NS-G-2.15 which is currently underway. For the sake of completeness, the related draft number should be added.				
2	4	Chapter 5, Para on NS-G-2.5 (page 5)	Last bullet: “ <del>To E</del> nsure consistency with <a href="#">the revision of IAEA NS-G-1.7 (DS494)</a> <del>under revision</del> ”	Clarification and completion. The corresponding draft number for the revision of NS-G-1.7 should be added.	x			
2	5	Chapter 5, Para on NS-G-2.6 (page 5)	2 <sup>nd</sup> bullet: “To consider whether Chapter 6 is covered by <a href="#">the revision of NS-G-2.11 (DS479)</a> <del>new version</del> ”	Clarification and completion. The corresponding draft number for the revision of NS-G-2.11 should be added.	x			
3	6	Chapter 5, Para on NS-G-2.6 (page 5)	8 <sup>th</sup> bullet: “To consider maintenance, surveillance and in-service inspection for severe accident management associated equipment, including permanently installed <del>or</del> <a href="#">and</a> mobile”	More appropriate wording. Both permanently installed and mobile SAM associated equipment should be covered.	x			
3	7	Chapter 5, Para on NS-G-2.7 (pages 5-6)	2 <sup>nd</sup> bullet: “Requirement 21 – To revise/expand the guidance on <a href="#">radioactive</a> waste management”	Insertion to be in line with Req. 21 entitled “Management of radioactive waste”.	x			



2	8	Chapter 5, Paragraph on NS-G-2.8 (page 6)	1 <sup>st</sup> bullet: “Requirement 18 – To include ... training in relation with management of severe accidents in a consistent manner with <a href="#">the revision of</a> NS-G-2.15 (DS 483); ...”	The revised NS-G-2.8 has to be made consistent with the revision of NS-G-2.15 which is currently underway.	x			
3	9	Chapter 5, last Paragraph before the table (page 6)	“Step 2: During the second stage, <a href="#">all</a> the <del>all</del> safety guides in the domain of NPP Operational Safety will be considered and ...”	Editorial.	x			
	10	NS-G-2.8	We propose three additions: <ul style="list-style-type: none"> <li>• The special situation of plants facing shutdown within the next few years should be addressed (e.g. increased fluctuation, loss of young staff, motivation problems)</li> <li>• The importance of the qualification of the non-operating personal (technicians, craftsmen) should be highlighted</li> <li>• Qualification is not only essential for the NPP personal but also for the personal of vendors and suppliers. Since a lot of components outlived their designers, the aspect knowledge management at the vendors / suppliers should get some additional attention.</li> </ul>		x	Two first bullets were accepted and reflected in the revised DPP. Third bullet was considered very important, however outside of the scope for NPP operational staff qualification and training. The subject considered will be raised at the level of qualification requirements for NPP suppliers under the Management system.		

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: <b>H:</b> Dept. of Reactor Licensing Project Management		Page 1 of 1					
Country/Organization: <b>H: Republic of Korea</b> / Korea Institute of Nuclear Safety							
Date: May 25, 2016							
Comment No.	Para/Line No.	Identified problem/Proposed new text	Reason/Description	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	5. Scope Step 1	[comment] It is recommended that effect of multi-unit nuclear power plant site would be considered in the cross cutting issues or in one of modification of NS-G-2.3.	Some plants in multi-unit site share electrical grid, switchyard, and/or heat sink. Some plants also share some safety systems and structures among units. Consideration of accident in multi-unit nuclear power plant site is important to some operation of nuclear power plants.	x			

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: <b>I</b> Page.... of.... Country/Organization: <b>I FRANCE ASN &amp; IRSN</b> June 2016				Date:			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Chapter 5, Para on Step 1 (page 3)	2 <sup>nd</sup> bullet: “ <b>Influence of Human and Organisational Factors (HOF) on human performance</b> ; Systemic approach to safety; Safety Culture	Human and Organisational factors are important to be taken into account for safety. It should be mentioned explicitly as a cross-cutting issue relevant for all safety guides.	x			
2	General	Although background to modify drafts and nature of changes to introduce are, in general clear, some changes to introduce remain unclear “consider....” (e.g. To consider Maintenance backlog control ; To consider Systematic use of Human Performance Tools ; To consider maintenance, surveillance and in-service inspection for severe accident management associated equipment, including permanently installed or mobile“. The DPP should be clearer on whether such topics will or not be addressed in the updates	Whether some topics will be addressed remains unclear.	x			
3	General	In each Safety Guide to be updated, it	To give better and more		This will be done		

		would be beneficial to have a table of contents with parts subject to update and parts not under review/revision	detailed direction to the drafters.		during the first CS meeting. The level of such information was found to be too detailed to be included in the DPP.		
4	General	Information on the second step of the process should be transferred in an annex (to ensure approval of DPP does not imply approving of step 2, as described)	Clarification	x	Before going to step 2 all Committees will be consulted and their approval will be sought.		