DS516 Criticality Safety in the Handling of Fissile Material
Step 3 – Approval of DPP by the Committees

	COMMENTS					RESOLUTION			
No.	MS	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	UK			Note: ONR's reviewers considered the approach adopted and the logic behind the update to be sensible, and they support SSG-27 being updated in the way proposed.					
2.	USA	1.	General	Recommend that the document include a Chapter or a Section on "Interface of Safety and Security Aspects in Handling of Fissile Materials." Note that DPP for DS517 covered this topic in its Section 5 Scope under bullet 4.	Completeness: The document should be clear when addressing aspects of interface between safety and security regarding handling of fissile nuclear materials, and will not be clear if distributed throughout the document. The document refers to interface with IAEA Nuclear Security Series No. 13; however; the scope needs to be expanded and distinct in addressing safety and security interface.			Y	The interface between safety, nuclear security, the system of accounting for, and control of, nuclear material will be addressed along the document, as needed. The same approach was adopted for all DPP for DS517, DS518 and for other IAEA safety standards for nuclear power plants and research reactors.
3.	USA	2.	General Section 6, pages 4 & 5	It is unclear how the structure of this document will be developed to accommodate and address the diverse cross-cutting issues of the multiple standards in Section 6.	Clarity & completeness to address and categorize interfaces with listed safety standards to ensure harmony in a succinct manner.	Y			This document is a Specific Safety Guide. The list of documents mentioned in Section 6 is actual list of references

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				Recommend Section 7 of this document be expanded to address areas of interface, and categorize such interfaces to establish harmony with other safety standards (see DPP DS517).					
4.	USA	3.	General	Recommend Section 6 be replaced by providing it as a reference list. This Section should summarize and focus on aspects and categories of interface to ensure harmony among IAEA standards as appropriate. Also recommend that older standards, developed in the period of 2009 – 2014, may also need to be revised.	Clarity & completeness	Y			The list of documents mentioned in Section 6 is actual list of references
5.	Australia	1	General	The justification provided for this revision is reasonable. Appropriate interface with GSR7 and IEC is provided, however further references may be required as the draft develops (e.g. SG on Termination of an emergency).		Y			
6.	Iran	1	Section 2 BACKGROUND/ First Paragraph/Line 4	"~~This Safety Guide addresses the requirements established in IAEA Safety~~	According to paragraph 3 of this DPP: "This guide was published in 2014 to provide recommendations on	Y			

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				~~Requirements: SSR-4 on Safety of Nuclear Fuel Cycle Facilities,~~ SSG-27 Presents guidance and recommendations on how to meet the requirements relating to criticality safety established in the following IAEA Safety Requirements publications: **NS-R-5 on Safety of Nuclear Fuel Cycle Facilities, GSR Part 4 on Safety Assessment for Facilities and Activities, GS-R-3 on The Management System for Facilities and Activities, WS-R-5 on Decommissioning of Facilities Using Radioactive Material, SSR-6 on Regulations for the Safety Transport of Radioactive Material, SSR-5 on Disposal of Radioactive Waste and <u>GS-R-2 on Preparedness and Response for a Nuclear or Radiological Emergency."</u>**	fulfilling the previous Safety Requirements in NS-R-5, relating to nuclear criticality safety." **So, this Safety Guide does not address at least the new requirements established in the SSR-4.** The proposed new text is exactly the paragraph 1.4 of SSG-27.				

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7.	Iran	2	Section 2 Page 1/Last paragraph	"The Guide was published also before most of the General Safety Requirements including GSR Part 4 (rev. 1)…"	GSR Part 4 is one of the references of SSG-27.	Y			
8.	Iran	3	Section 2 Page 2/First paragraph	"An analysis of the scope and content of SSG-27 and the current requirements in SSR-4, GSR Part 5, GSR Part 6, SSR-5, SSR-6 and GSR Part 7 confirmed that its technical contents remain valid, but have outdated references and do not fully address all the current requirements."	Section 6 of SSG-27 is about PLANNING FOR EMERGENCY RESPONSE TO A CRITIALITY ACCIDENT. Also, according to paragraph 1.4 of SSG-27: "1.4. The objective of this Safety Guide is to provide guidance and recommendations on how to meet the relevant requirements for ensuring subcriticality when dealing with fissile material and **for planning the response to criticality accidents**. …This Safety Guide presents guidance and recommendations on how to meet the requirements relating to criticality safety established in the following IAEA Safety Requirements publications: … and **Preparedness and Response for a Nuclear or Radiological Emergency**	Y			

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					[GS-R-2]. Terms used in nuclear safety are defined in the IAEA Safety Glossary [9]" So, it is suggest to analyze the scope and content of SSG-27, taking into consideration the requirements of GSR Part 7 too.				
9.	Japan	1	Section 2 BACKGROUND Line 3	**2. BACKGROUND** ... in the handling, processing, storage, transport and disposal of these materials ...	Editorial. Missing ",".	Y			
10.	Japan	2	Section 2. BACKGROUND 2nd para. Line 2	It may also be used as a basis for the safety evaluations conducted during IAEA missions, including Safety Evaluation of Fuel Cycle Facilities during Operation (SEDO) missions.	Clarification of "SEDO".	Y			
11.	Japan	3	Section 2. BACKGROUND 3rd para Line 10	Req.21 Design extension conditions, Req.27 Human factors engineering, Req. 38 Design for criticality safety, Req. 66 Criticality control in operation and Req. 75 Interfaces between safety, nuclear security and the	Completeness. Req. 27 "Human factors engineering" on SSR-4 is also introduced as a new requirement.	Y	Section 3 point 2 has been modified as follows "These requirements are not		Req.27 Human factors engineering as established in SSR-4 cannot be considered as totally new requirement in comparison with the requirements related to human factors as

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				State system of accounting for, and control of, nuclear material.			fully addressed in the Guide, particularly Req. 21 Design extension conditions, Req.27 Human factors engineering …"		established in NS-R-5 (paras 6.15-6.16) but modified.
12.	Japan	4	Section 5 SCOPE Line4-6	It covers all types of facilities and activities that have or use fissile material, in quantities or concentrations that pose potential hazards to personnel, the public and the environment, except those that are designed to be intentionally critical, for example the core in a nuclear reactor, or a critical assembly.	TO keep a consistency with SSG-27. Criticality safety should be considered only for facilities and activities, which might cause hazards to personnel, the public and the environment.	Y	"Personnel" replaced by "workers".		Consistency with SSR-4
13.	Japan	5	Section 5 SCOPE 4th para	The interface between safety, nuclear security, the system of accounting for, and control of, nuclear	To keep a consistency with Requirement 75 in SSR-4.	Y			

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				material will also be considered.					
14.	USA	4.	Section 6 Page 4, last listed entry	Text revisions: "IAEA Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2018 Edition, IAEA Safety Standards Series No. SSR-6 (Rev. 1), IAEA, Vienna (2018)."	The old text on page 4 does not reflect the current situation with respect to SSR-6. Old: "IAEA Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition (to be updated under DS495)."	Y			
15.	UK	1	Section 6 Page 4, last line	Change "IAEA Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition (to be updated under DS495);" To "IAEA Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2018 Edition; "	SSR-6 2018 Edition is not the latest issued version.	Y			
16.	UK	2	Section 6 Page 5, list of bullet points	Include reference to: IAEA Safety Standards Series No. SSG-27, Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material	It is noted throughout the DPP that the current and updated SSG-27 includes elements of transport. As such, it would seem appropriate to include SSG-26 as an interfacing	Y			

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				(2012) (to be updated under DS496)	document.				
17.	UK	3	Annex Page 7, Section 3	Change: "Para 6.144 of SSR-4 related to important factors for criticality" To "Para 6.144 of SSR-4 related to important factors for criticality (including temperature)"	Temperature is a parameter that is often forgotten about but recent work has shown that it can affect neutron multiplication. It aligns with 6.82 of SSR-4 which requires temperature effects to be considered.	Y			