

Committees Members Comments on

DS456

“LEADERSHIP AND MANAGEMENT FOR SAFETY”

Committees Members (NUSSC)	Nb of Comments	Accepted	Rejected	Nature of Comments	
				Editorial/Clarity	Technical accuracy/ Completeness
UK	10	9	1		
ENISS	1	1	0		
Finland	19	19	0		
France	77	71	6		
Japan	14	9	5		
Canada	7	3	4		
Poland	8	7	1		
Ukraine	5	2	3		
USA	15	15	0		
Germany	51	45	6		
Total:	207	181	26		

TITLE : DS456 Leadership and Management for Safety (6 February 2013)

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
USA	1	General	The draft guide contains several references that would require licensees to commit to “continuous improvement” in their safety processes, management systems, and safety culture. While continuous improvement is a noble goal, continuous improvement without a balancing of the value to be obtained can lead to excessive expenditures of money with little or no real safety benefit, and in some cases may actually lead to a reduction in safety provided. I would suggest that something be added to the document that improvements in systems or processes need to be weighed against the values to be added in overall safe performance.		X			
JAP	2	General	All of the definitions of terminologies stated in the footnotes should be summarized in a specific definition section after the main body.	Clarification of definitions.		X only the ones that are not in the IAEA glossary		

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
CAN	3		I suggest an illustration to depict the Management System model for safety (perhaps added to section 2).	Reason: The thinking is that an illustration is better than words to show the Mgt System model so readers can see how it differs from the QA model everyone is familiar with. This is one of the major directions management standards are taking.			X	No example in a requirement but can be in the guide
ENIS S	4		<i>Editorial Comments</i>	<p>1. The draft mentions ISO 18000 that doesn't exist instead of BS OHSAS 18001</p> <p>2. In the references some superseded standards are mentioned, for example ISO 9001: 2000 instead of ISO 9001:2008 and ISO 14001:1996 instead of ISO 14001:2009.</p> <p>3. In the index Requirement 7: Management of processes and activities is missing.</p>	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	5	General	As DS456 is an update of GS-R-3, it would be useful to have table to see where a requirement of GS-R-3 is captured in DS456 and where a requirement of GS-R-3 has not been included in DS456 with some rationale for that. Such table should be put on NUSSC website before NUSSC meeting		X			
FR	6	General	As DS456 is supposed to capture lessons learned from Fukushima Daiichi accident, an extract of the IAEA gap analysis table with the relevant lessons learned and the proposed text in DS456 would be useful. Such table should be put on NUSSC website before NUSSC meeting		X			
FR	7	General	Chapters 1 to 4 are mostly based on top-down and normative approach and statements. Some bottom-up issues appear only in requirement 12. It looks not very well balanced	Leadership and management for safety would be based not only on a top-down approach and actions, but would be aware and take into account of what happen really during activities performed on the field, and would consider and encourage information, suggestion, alerts coming from the field in an effective bottom-up approach			X	It is the aim of 3.7/3.8 and 3.9 to impulse the bottom-up approach 4.23 contribution of all individuals to the MS 4.44 self-assessment Chapters 3, 4 and 5 are complementary. Ch3&4 are actually supporting 5

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	8		The term “licensee” should be replaced by “authorized party” and/ or “authorized party and regulatory body”	According to the IAEA glossary, a license (therefore a licensee) is only one form of authorization (as are registration and certification). It should be clear when a requirement is applicable to the licensee only or when it is also applicable to other entity such as the regulator.	X			
FR	9	1.1	This Safety Requirements publication establishes the requirements for establishing, and sustaining effective leadership and management for safety ¹ in <u>organizations concerned with, and authorized facilities and activities² that give rise to radiation risks—and</u> organizations concerned with radiation risks.	To be more consistent with SF-1 and the IAEA safety glossary (see comment on footnote 2)	X			
FR	10	Footnote 1	For the purpose of <u>In this publication and consistently with IAEA safety glossary,</u> safety means ...	To stress consistency with IAEA safety glossary	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	11	Para. 1.1 footnote 2	<p>The new definition of ‘nuclear installation’ includes: nuclear power plants; research reactors (including subcritical and critical assemblies) and any adjoining radioisotope production facilities; spent fuel storage facilities; facilities for the enrichment of uranium; nuclear fuel fabrication facilities; conversion facilities; facilities for the reprocessing of spent fuel; facilities for the predisposal management of radioactive waste arising from nuclear fuel cycle facilities; and nuclear fuel cycle related research and development facilities.</p> <p>...</p> <ul style="list-style-type: none"> - final disposal repositories - ... 	<p>The definition of facilities should be consistent in between the requirements and guides. The radioactive waste facilities are partially included in the nuclear facilities. see DS433 draft 00.16, footnote 1, page 4</p> <p>Replace radioactive waste management facilities with final disposal repositories.</p>	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	12	Footnote 2	<p>By facilities and activities that give rise to radiation risks it refers to regulated and/or licensed <u>authorized</u> facilities and activities, typically:</p> <ul style="list-style-type: none"> – Nuclear facilities (power reactors, research reactors, <u>irradiation installations</u>, fuel cycle facilities, isotope production facilities, <u>some</u> facilities for mining and processing of radioactive ores, milling) – Activities using sources of ionizing radiation (medical activities, non-destructive examination, measurement or detection purposes, <u>import or export of radiation sources...</u>) – Radioactive waste management facilities; – The transport of radioactive material; = Radiation protection activities. 	<p>The footnote gives a definition of facilities and activities but it is not the one of the IAEA safety glossary. It should be made consistent (or glossary definition should be changed)</p> <p>Furthermore, the glossary precises that “The term <i>facilities and activities</i> is very general, and includes those for which little or no <i>regulatory control</i> may be necessary or achievable: the more specific terms <i>authorized facility</i> and <i>authorized activity</i> should be used to distinguish those <i>facilities and activities</i> for which any form of <i>authorization</i> has been given.</p>	X	Import and export fit better in transport?		

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	13	1.1	“This Safety Requirements publication establishes <u>defines</u> the requirements for establishing, and sustaining effective leadership and management for safety in <u>all type of</u> facilities and activities that give rise to radiation risks and <u>in all</u> organizations concerned with radiation risks.”	The present wording is cumbersome (“... establishes the requirements for establishing ...”). In order to strengthen the introductory statement, it should be clarified that the document is applicable to all types of facilities and activities and to all types of organizations. This intention is explicitly stated in Section 2 of the DPP for DS456, too.	X			
GER	14	Footnote No. 2	Delete this footnote and transfer the text into a separate para in the subsection “Scope”.	The information provided in this footnote is essential for the reader of this document. Therefore, it should be included in the main text. See our related proposal to insert a new para after 1.8.		I would rather put that in the background after 1.3		
GER	15	1.2	Deletion of footnote 3 and listing of GS-R-3 in References	All references should be listed in the References and not in a footnote	X			
FR	16	1.2	emphasizes the principles that leadership and management for safety and an integrated management system are essential <u>to the adequate definition and implementation of safety measures and to the development of a strong safety culture and ultimately to continuously improve safety performance.</u>	Safety culture is essential but is not enough. Safety measures are also needed	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	17	1.3	1 st sentence: “This publication applies the Fundamental Safety Objective and Safety Principles of the Fundamental [1], in particular Principle 3, which states that ...”	Correct title and citation of Ref. [1].	X			
FR	18	1.4	<u>Safety does not only rely on systems, structures and components, safety has to be achieved by means of also depends on an effective leadership ensuring a strong safety culture, and an effective management for safety based on integrated management system that controls all activities of the organization and gives safety an overriding priority.</u>	Leadership and management systems are not enough...	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	19	Para 1.4	Safety has to be achieved by means of effective leadership ensuring a strong safety culture, and an effective management for safety based on integrated management system that controls all activities of the organization and gives <u>the fundamental</u> safety <u>objective</u> an overriding priority. ...	The aim of using “fundamental safety objective” (to protect people and the environment from harmful effects of ionizing radiation, DS456, 2.1) is to allow for taking into account the safety-security coordination and interfaces, as the two regimes share that objective and are both needed to achieve it. According to IAEA SF-1 “Safety measures and security measures must be designed and implemented in an integrated manner so that security measures do not compromise safety and safety measures do not compromise security.” Present wording in 1.4 may be interpreted to ignore security.	X			
JAP	20	1.4/line 5	Regarding to the footnote 3 on GS-R-3 page 1 about ‘economic’. it should be retained the same as follows; “Economic objectives are included in the list of elements that have to be integrated, as it is recognized that economic decisions and actions may introduce or may mitigate potential risks.”	Clarification. These elements are essential points especially ‘economic element’ is some specific and limited use. Clear explanation should be necessary.	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
USA	21	1.4	<p>1.4. Safety has to be achieved by means of eEffective leadership ensuring is necessary in a strong safety culture. Additionally, -and an effective management managing for safety must be based on an integrated management system that controls all activities of the organization and gives makes safety an overriding priority. This system integrates all elements of management including safety, health, environmental, security, quality and economic elements so that safety is not compromised.</p> <p>An integrated management system is a single coherent system in which all constituents of an organization are integrated to enable the organization's objectives to be achieved. Such constituents include the organizational structure, resources and organizational processes. <u>This system integrates all elements of management including safety, health, environmental, security, quality and economic elements so that safety is not compromised.</u></p>	Editorial suggestions	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	22	1.5	It is fundamental that leadership for safety and management for safety are developed together and integrated <u>in the organization way of running its “business”</u> so as to involve all individuals dealing with safety related activities in the organization and to ensure a high level of safety performance.	Integrated in what ?	X			
USA	23	1.5	1.5. It is fundamental that leadership for safety and management for safety are developed together and integrated so as to involve <u>that</u> all individuals dealing with safety related activities in the organization and to ensure <u>are involved and are committed to</u> a high level of safety performance.	Editorial suggestion	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
UK	24	1.6	1.6. The difference between management and leadership can be stated simply whereby ‘management’ is a function and ‘leadership’ is a relationship. Management is about ensuring that an organization operates efficiently and that work is completed in accordance with requirements, plans and resources. Leadership aims at achieving commitment to goals, shared values and behaviours that influence and motivate individuals and organizations to continually improve performance. <u>Managers will usually be leaders too.</u>	Important to stress that ‘leadership’ is not just for senior managers.			X	Here we are talking about management as a function, not managers. Please look at footnote 7: “The term leader is used in this publication to refer to managers as leaders as well as other individuals demonstrating leadership”
FR	25	1.7	These requirements are based on the clear definition and allocation of responsibilities established in Principle 1 of the Fundamental Safety Principles [1] which states that “The prime responsibility for safety must rest with the person or organization responsible for facilities and activities that give rise to radiation risks.” <u>put therefore a strong emphasis on leadership and management for safety at the authorized parties.</u>	Yes, but the licensee is not the only one concerned by safety. Regulators are also a key player.	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
CAN	26		On page 3 at the top, Aim (a) uses the word 'guarantee'. My comment is to replace this word with something else because the standard should not mislead readers into thinking that safety can be guaranteed (by any means), or that any individual has this impossible responsibility. Example replacement words could be 'promote', or 'improve', 'affect', etc.			X see below		
FR	27	1.7 a	a. That every individual in an organization understands why and how their actions have to be performed to guarantee <u>enable</u> safety;	“Guarantee” is a very strong word and excessive for some tasks...		Enable is a bit weak, I propose ensure		
UK	28	1.7 a	a. That every individual in an organization understands why and how their actions have to be performed to guarantee <u>ensure</u> safety, and why ;	Reads better, and ‘Ensure’ is more appropriate than ‘guarantee’	X			
FR	29	1.7 c	To insert at the end of alinea c : <u>“and to take advantage of human capabilities in recovering from failures and dealing with degraded, non-familiar or unexpected situations.”</u>	To focus the objective not only on human error (negative aspect) but also on the positive contribution of human and teams	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	30	1.7 c	<p>What are differences between <u>systemic</u> & <u>systematic</u>? For example;</p> <p>1.7 c. A <u>systemic</u> approach to the whole range of interactions of individuals with the technology and the organization in order to prevent human and organizational failures.</p> <p>4.7 b. Describing the planned and <u>systematic</u> actions necessary to provide adequate confidence that all requirements are satisfied;</p> <p>If there is no significant difference, it should be used as an integrated word as "<u>systematic</u>".</p>	<p>Editorial.</p> <p>The same things are found in 2.4, 2.5f & 4.7 b, 4.53, 4.54.</p>	X	<p>We need to add a footnote in 1.7 to define the systemic approach. Systemic means taking into account all parts of the system composed by the individuals (staff), organization (Utility) and the technology (machines, reactor) Systematic means</p>		

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
USA	31	1.7	<p>1.7 The objective of this publication is to establish requirements in<u>with</u> respect to<u>of</u> Principle 3 of the Fundamental Safety Principles [1] on leadership and management for safety, <u>in order</u> to develop, maintain and continually improve:</p> <p>.....</p> <p>The main aims<u>primary objective</u> of the requirements are to ensure:</p>	Editorial suggestion	X			
GER	32	1.8 – 1.11	<p>The DPP for DS456 states in Section 3: “It is not the intention that this publication should be directly and entirely applicable to vendors, contractors and suppliers.”</p> <p>Should not a similar statement be included in the subsection “Scope” (e.g. in a separate para) as well ?</p>	Clarification and completion with regard to the scope of the document.	X			
GER	33	1.8	<p>The requirements established in this publication can <u>shall</u> be used in the following ways:</p>	All 4 bullets refer to requirements which must be fulfilled. It is not possible to introduce a weak point in GSR Part 2 in the form "can be used". The term "shall be used" was used in SPESS Step 6.	X			
GER	34	1.8	<p>1st bullet: “... directly responsible for facilities and activities that give rise to radiation risks;”</p>	Consistency with the wording used elsewhere in the document.	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	35	1.8 4. bullet	By the regulatory body as the basis <u>to fulfill its responsibility in conjunction with GSR Part 1</u> for leadership and management arrangements to fulfil its responsibilities in compliance with Ref [2].	Reference is the requirement 19 in GSR Part 1	X			
FR	36	1.8	1.8. The requirements established in this publication can <u>are to</u> be used in the following ways:	These are requirements.	X			
FR	37	1.8 bullet list	– By the licensee as a basis for leadership and management arrangements of <u>individuals and</u> organizations directly responsible for facilities and activities that give rise to radiation risk;	Individuals should be mentioned, especially with regard to leadership...	X			
FR	38	1.8 bullet list	– By the licensee to specify to a supplier via contractual documentation <u>or other means</u> , any specific requirements of this Safety Requirements publication that must be included in the supplier's management system for the supply and delivery of safety related equipment, products and services;	To offer flexibility (the national regulations may already impose things that do not have to be quoted again in a contract...)	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
USA	39	1.8	<p>1.8. The requirements established in this publication can be used in the following ways:</p> <ul style="list-style-type: none"> – By the licensee as a basis for leadership and management arrangements of organizations directly responsible for facilities and activities that give rise to radiation risk; – By the regulatory body as the basis in conjunction with Ref. [2] for leadership and management arrangements- <u>decisions</u> to fulfill its responsibilities. 	Editorial suggestion	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	40	after 1.8	<p>Insert new Para 1.9 with the following text: “This publication applies to all types of regulated and/or licensed facilities and activities that give rise to radiation risks, typically:</p> <ul style="list-style-type: none"> – Nuclear installations (including nuclear power plants; research reactors; radioisotope production facilities; spent fuel storage facilities; facilities for the enrichment of uranium; nuclear fuel fabrication facilities; conversion facilities; facilities for the reprocessing of spent fuel; facilities for the predisposal management of radioactive waste arising from nuclear fuel cycle facilities; nuclear fuel cycle related research and development facilities); – Facilities for the mining or processing of uranium ores or thorium ores; – Radioactive waste disposal facilities; – Activities using sources of ionizing radiation (for medical, industrial, research, inspection and other purposes); – Transport of radioactive material; – Radiation protection activities.” 	<p>This is an indispensable information which needs to be included in the subsection “Scope”.</p> <p>A listing of facilities (if necessary) should take into account the revised definition of the term ‘nuclear installations’ which has been endorsed at the 32nd CSS meeting in October 2012. According to that definition, ‘nuclear installation’ means “any nuclear facility subject to authorization that is part of the nuclear fuel cycle, except facilities for the mining or processing of uranium ores or thorium ores and radioactive waste disposal facilities”.</p> <p>If our proposal will be adopted, Footnote No. 2 can be deleted.</p>		OK BUT MAY BE BETTER AFTER 1.3 IN BACKGROUND		

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	41	1.9	1 st sentence: “This Safety Requirements publication is applicable throughout the lifetime of facilities and for the entire duration of activities in normal, transient, <u>operational states</u> as well as in accident conditions.”	The term ‘transient conditions’ is not applicable to non-reactor facilities. The new terminology introduced by the IAEA Safety Requirements SSR-2/1 and SSR-2/2 distinguishes between ‘operational states’ and ‘accident conditions’. The term ‘operational states’ includes normal operation and anticipated operational occurrences. The term ‘accident conditions’ includes design basis accidents and design extension conditions.	X			
FIN	42	Para 1.9	This Safety Requirements publication is applicable throughout the lifetime of facilities and for the entire duration of activities in normal, transient, as well as in accident conditions. This includes any subsequent period of institutional control that may be necessary. The lifetime for a facility includes its siting, design, construction, commissioning, operation and decommissioning (or closure) <u>till the facility or activity is released from regulatory control.</u>	add the end point of the regulatory control.	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	43	1.9/line 2	1.9. This Safety Requirements publication is applicable throughout the lifetime of facilities and for the entire duration of activities in normal, transient, as well as in accident conditions all operational states and accident conditions.	Clarification in accordance with plant conditions/states written in SSR-2/1 and SSR-2/2..	X			
UKR	44	Para 1.9, page 3, line 5	Add after words decommissioning (or closure) – "... and post closure period if any"	To take into account the period of post-closure institutional control for disposal facilities	X			
USA	45	1.9	1.9. This Safety Requirements publication is applicable throughout the lifetime of <u>the facilities it applies to</u> and for the entire duration of activities <u>under</u> in normal, transient, and as well as under in accident conditions. This includes any subsequent period of institutional control that may be necessary <u>involving the use of necessary institutional control</u> . The lifetime for a facility includes its siting, design, construction, commissioning, operation and decommissioning (or closure).	Editorial suggestion	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	46	1.10	International or national standards ⁴ can be used to support the design of a management system but they are <u>may</u> not <u>be</u> sufficient to satisfy the requirements for safety.	Unless the IAEA made an exhaustive review of all national standards, it is a bit too strong	X			
GER	47	1.10	last sentence: “International or national standards can be used to support the design of <u>an integrated</u> management system but they are not sufficient to satisfy the requirements for safety. ”	The requirements of this draft correspond to an ‘integrated management system’ (compare with Paras 1.4, 1.7, 2.3 and Requirement 3). It cannot be ruled out that there are or will be international or national standards that satisfy the requirements for safety.			X	See above
GER	48	1.11	1 st sentence: “This publication does not attempt to define all those specific health, environmental, quality and economic requirements to be addressed that have already been established elsewhere in other IAEA publications <u>of the IAEA Safety Standards Series</u> [2, 3, 4, <u>5</u> , 6, 7, <u>8</u>] and in international codes and standards [9, 10, 11, 12, 13, <u>15</u>].”	Ref. [5] and [8] are not cited in the document. Our proposal for proper citation in Section 1 is provided here. For the purposes of ISO 9001:2008 “Quality Management Systems: Requirements”, the terms and definitions given in ISO 9000:2005 “Quality Management Systems: Fundamentals and Vocabulary” apply. Therefore, a new reference [15] to the latter document should be included here.	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	49	1.11	include new last sentence: “... leadership and management for safety. The relationship between safety culture and security culture is addressed in a publication of the IAEA Nuclear Security Series [16]. ”	With regard to Section 5, DS456 has certainly an interface between safety and security. Safety and security cultures coexist and need to reinforce each other because they share the common objective of limiting radiation risks. This objective is largely based on common principles. Since the relationship between safety culture and security culture is discussed in Section 2.4 of the IAEA Nuclear Security Series No. 7 “Nuclear Security Culture” (2008), we strongly recommend to include a new reference [16] to this publication at an appropriate place in the document. Our proposal for proper citation in Section 1 is provided here.	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	50	Requirement 1	<p>Requirement 1: Responsibility for safety</p> <p>The licensee⁵ shall retain the prime responsibility for safety throughout the lifetime of the facility or activity, and this responsibility shall not be delegated.</p> <p><u>As the prime responsibility for safety lies with the licensee, the licensee shall ensure that:</u></p> <ul style="list-style-type: none"> - <u>an integrated management system is implemented;</u> - <u>managers demonstrate an effective leadership, consistent with their position in hierarchy</u> <p><u>which gives an overriding priority to safety and foster safety culture.</u></p>	<p>This duplicates SF1 (§3.5) so does not bring added value.</p> <p>However, valuable requirements are stated in 2.1 to 2.4. They could be combined to form the overarching requirements</p>	X			
USA	51	Requirement 1	<p>Requirement 1: Responsibility for safety</p> <p>The licensees shall retain the prime <u>primary</u> responsibility for safety throughout the lifetime of the facility or activity, and this responsibility shall not be delegated.</p>	Editorial suggestion	X			
GER	52	RQ 1 Footnote 5	<p>For the purposes of this publication, the term 'licensee' is used; other forms of authorization such as registration might apply. In addition to Ref. [2] some of the requirements in this section may also apply to the regulatory body.</p>	<p>The footnote refers to the term "licensee", the reference to the regulatory body should be clarified in 1.8</p>	X			

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	53	Para 2.2	The licensee shall continually improve safety culture also by effective leadership for safety and security.	Clarification of wording and addition of the security aspect.	X			
JAP	54	2.2 & Requirement 10	<p>What are differences between <u>continually</u> & <u>continuously</u> ? For example;</p> <p>2.2. The licensee shall provide effective leadership for safety that <u>continually</u> improves safety culture.</p> <p>R10 Interactions with interested parties shall be identified, <u>continuously</u> reviewed in an open and transparent manner and integrated in the management system when relevant.</p> <p>If there is no significant difference, it should be used as an integrated word as "<u>continuously</u>".</p>	<p>Editorial.</p> <p>The same things are found in para. 1.7, 2.2, etc..</p>	X	Both means "without interruption"		

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COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
CAN	55	Para. 2.3	Although it states on page 4 at the top that, "this publication does not provide guidance on how to implement the requirements", as they are provided in related Safety Guides, consider referencing appropriate guidance for requirement 1, paragraph 2.3. As this will be one of the challenges in the implementation of this standard, pointing to a document would be helpful if standards writing rules permit.		X	It is already pointed at several document to develop an IMS with ISO,NQA 1, ...as well as ref to GS-G-3.1 and GS-G-3.5		
GER	56	2.3	The licensee shall establish—and implement <u>be responsible for the establishment and implementation of</u> an effective integrated management system	The licensee is responsible for the MS and senior management shall establish and implement the MS (see Requirement 3)	X			
GER	57	2.4	The requirement 2.4 should direct follow the requirement 2.2	The requirements for "safety culture" should be hold together	X			
FR	58	2.5	The licensee shall be responsible, <u>in accordance with requirements established or approved by the regulatory body</u> , for:	Enable to delete 2.6		In accordance with requirements established or approved by the regulatory body, The licensee shall be responsible for:		

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
UKR	59	Para 2.5, page 5, d	d. Verifying the appropriate design and the adequate quality of facilities and activities and of their associated equipment to ensure safety, especially safety important systems, structures and elements	For completeness		especially systems, structures and components important for safety		
FR	60	2.5 d	d. Verifying <u>Ensuring</u> the appropriate design, <u>construction, commissioning and operation and decommissioning of the facilities and</u> the adequate quality of facilities and activities and of their associated equipment to ensure safety;	Design is not enough. Verifying is only one means.	X			
FR	61	2.5 e	e. Ensuring that suppliers/ <u>contractors</u> understand and comply with safety requirements <u>related to the products or services they provide</u> ;	Suppliers /contractors do not need to understand <i>all</i> safety requirements	X			
FIN	62	Para 2.5 g & h	2.5. The licensee shall be responsible for: g. Ensuring the safe <u>management</u> of all radioactive material that is used, produced, stored or transported; h. Ensuring the safe <u>management</u> of all generated radioactive waste.	Safe management of radioactive material and radioactive waste should be required instead of control only.		I propose to keep both “safe management and control”: management highlighting all activities related to radioactive materials and wastes and control giving the responsibility as regard to safety and security		

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	63	2.5 g.	“Ensuring the safe control of all radioactive material that is used , produced, <u>processed, used, handled</u> , stored, <u>disposed of</u> or transported;”	For completeness. Listing is taken from the definition of the term ‘facilities and activities’ in the IAEA Safety Glossary (2007 Edition): 1. “Facilities includes ... places where radioactive material is produced, processed, used, handled, stored or disposed of ...” 2. “Activities includes ... the transport of radioactive material ...”	X			
GER	64	2.5	Insert new bullet after g.: “The licensee shall be responsible for: ... <u>h. Ensuring the safe control of all radioactive sources and radiation generators;</u> <u>i. Ensuring the safe control of all generated radioactive waste;</u> <u>j. Ensuring provision ...;</u> <u>k. Ensuring communication ...”</u>	Bullet h.: Complete the list with respect to activities outside nuclear installations, especially those using radioactive sources and radiation generators for medical, industrial, research, inspection and other purposes.	X			
FR	65	2.5 h and i	h. Ensuring the safe control of all generated radioactive waste and i. Ensuring provision, including resources and funding, for the long term management of radioactive waste, considering present and future generations.	Both bullets could be combined as they deal with radioactive waste	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	66	2.5 i.	“Ensuring provision, including resources and funding, for the long term management of radioactive waste, <u>including disposal</u> , considering present and future generations.”	Clarification.	X			
FIN	67	Footnote 5, page 5	For the purposes of this publication, the term ‘licensee’ is used; other forms of authorization such as registration might apply. In addition to Ref. [2] some of the requirements in this section may also apply to the regulatory body. In addition to Ref. X some of the requirements in this section may also apply to the vendors and supplier of product and services important to safety.	IAEA SSR-2/1 should be added to the references and accordingly vendors and suppliers should be mentioned.		Some of the requirements may be used by the vendors and suppliers of products and services important to safety, but this does not relieve the licensee’s responsibility for safety.		
FR	68	2.6	Delete 2.6	Superfluous (see changes proposed to 2.5 to accommodate deletion)	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	69	2.6	These responsibilities shall be fulfilled in accordance with applicable safety objectives and requirements as established or approved by the regulatory body, and their fulfilment shall be ensured through leadership and management for safety, including the development, maintenance and improvement of <u>implement, assess and continually improve</u> the management system.	Clarification. In accordance with PDCA (Plan, Do, Check and Act) cycle, modify these name of processes for clarification the same as para.4.4.		See comment above		
GER	70	2.7	The licensee <u>Senior management</u> shall clearly define the management structures, responsibilities and accountabilities for safety throughout the organization. Line managers ...	This is task of senior management and not of the licensee.	X			
FR	71	2.7	The licensee shall clearly define the management structures, responsibilities and accountabilities for safety throughout the organization. Line managers shall be responsible for the safety of all activities under their control, and shall be held to account for the performance of such activities.	The responsibilities of line managers are to be defined by the licensee....	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	72	2.7	Organizations shall be structured in a manner that promotes <u>enables</u> clear accountability for safety, for example:- – through establishment of spans of control for individual managers, – specification of the number of layers of hierarchy, – taking of decisions on which resources and capabilities to retain or develop within the licensee’s organization and which to outsource.	No example in requirements	X			
USA	73	2.7	2.7. Organizations shall be structured in a manner that promotes clear accountability for safety, for example <u>through</u> : – through establishment of spans of control for individual managers, – specification of the number of layers of hierarchy , – taking of decisions <u>determinations</u> on <u>of</u> which resources and capabilities to retain or develop within the licensee’s organization and which to outsource.	Editorial suggestion	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	74	2.8	Senior management ⁶ shall put in place effective arrangements for governance of safety, e.g. setting visions, strategy and policy, and overseeing implementation and performance. The most senior manager shall be the primary source of direction regarding safety. In particular, senior manager shall determine which resources and capabilities to retain or develop in-house and which to partially or fully outsource.	No need to make a specific expectation on the most senior manager This was previously in the bullet list of 2.7 and is worth keeping in the requirements.	X			
GER	75	2.8	2 nd sentence: “The most senior manager <u>management</u> shall be the primary source of direction regarding safety.”	Clarification in order to avoid the ambiguous term ‘most senior manager’.	X			
FR	76	2.9	The licensee shall consider the expectations of interested parties in such a way that safety is not compromised its <u>decision making process.</u>	Superfluous as “consider” is a weak action.	X			
FR	77	2.10	The licensee shall communicate <u>all relevant</u> safety aspects and requirements to suppliers/ contractors and shall verify that they are <u>fully</u> implemented in safety related equipment, products and services that are supplied.	Clarification	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	78	Para 2.10	The licensee shall communicate safety aspects and requirements to vendors and suppliers and shall verify that they are implemented in the plant design and construction, in safety related equipment, products and services that are supplied.	add vendors to cover the whole design of the facility. The whole lifecycle of the facility should be covered.	X			
FR	79	Section 3		An item could be inserted on the way the managers can express their doubts or disagreement when they have to deal with a situation or decision that they consider as not compliant with their own vision of the safety	X			
FR	80	3.1	Senior management shall develop shared values for safety, behavioural expectations <u>including safety culture</u> , as well as promote ownership.	Clarification		behavioural expectations that shape safety culture		
FIN	81	Para 3.1	Senior management shall develop shared values for safety, <u>integration of safety and security</u> , behavioural expectations, as well as promote ownership.	While safety must not be compromised, there should be a reminder to always consider both regimes for safety and security and to aim for a mutually supportive design and implementation.	X			
UK	82	3.1	3.1. Senior management shall develop shared values for safety and behavioural expectations for safety, as well as and promote ownership.		X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
POL	83	3.1	3.1. Senior management shall develop shared values for safety, behavioural expectations, as well as promote ownership .	The wording “promote ownership” in the context of this sentence is unclear, what does it exactly mean here?	X	It means that each individual should make these values and behaviours expectations their own ones.		
GER	84	3.1	“Senior management shall develop shared values for safety, behavioural expectations, as well as promote ownership <u>of safety</u> .”	Consistency with the wording in Para 5.2 b.	X			
FIN	85	Para. 3.2	Senior management shall develop and communicate a clear safety policy, strategy, plans and objectives for safety <u>and for integration of safety and security</u> .	See 8.	X			
FR	86	3.3	Senior management shall ensure that responsibilities and accountabilities at all levels are in line with policies, strategy and objectives to ensure safety <u>requirements and</u> performance goals are met and to guide decision making or daily work.	Performance could be misinterpreted (e.g. : the safety is goal is too have less than one INES level I event in the year)...	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
CAN	87	Para. 3.1, 3.2, and 3.3	<p>Para. 3.1, 3.2, and 3.3 clearly mention safety, that there shall be a policy, plans, strategy, objectives, that it shall be communicated, etc. At this point, however, safety needs to be linked to the overall planning of the business by senior management. This ensures safety is considered (as a top priority) when the business/organization is defined, planned and controlled (creation of the vision and values, setting of objectives and goals).</p> <p>Note: I see this is mentioned in requirement #5 but suggest it be mentioned in requirement #2 to establish the link to leadership.</p>				X	<p>We are here on leadership for safety not for business...</p> <p>It is clear in 1.6 that Leadership aims at achieving commitment to goals, shared values and behaviours that influence and motivate individuals and organizations to continually improve performance.</p>
FR	88	3.4	<p>Senior management shall develop and maintain leadership capabilities within the organization <u>so that managers at all levels demonstrate leadership</u>. Such capabilities shall include leadership in severe or unexpected situations.</p>	Clarification	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	89	3.4/line 1	3.4. Senior management shall develop and maintain leadership capabilities within the organization. Such capabilities shall include leadership in severe or unexpected situations <u>all operational states and accident conditions.</u>	Clarification in accordance with plant conditions/states written in SSR-2/1 and SSR-2/2..	X			
UKR	90	Para 3.4, page 7, Second phrase	Such capabilities shall include leadership <u>in routine as well as</u> in severe or unexpected situations	Leadership in normal conditions is missing			X	The intent is not to forget severe and unexpected conditions that may require a different type of leadership
FR	91	3.5	Managers at all levels shall demonstrate leadership and shall be role models. <u>They shall ensure, by their acts,</u> the promulgation of shared values and expectations through the organization including when decisions are made, when problems arise and whenever communicating with others.	Leadership is covered by modified 3.4 Alternative wording to avoid "role models"	X			
FR	92	3.6	A prerequisite to this is a shared understanding throughout the organization of potential risks and consequences, and how to manage them.	Not specific to leaders. See comment on 3.7	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	93	3.8	Leaders at all levels shall use their influence to support and encourage employees to achieve safety in their work and seek their active involvement in improving safety performance including the consideration of staff's input in safety related decisions. A prerequisite to this is a shared understanding of potential risks and consequences, and how to manage them.		X			
FR	94	3.9	Locate 3.9 after 3.4	Expectations for senior management are at the beginning of this section	X			
GER	95	3.9	“Senior management shall encourage open communication and shall seek continual feedback on how effective the leadership is in ensuring <u>and improving</u> safety, and shall take action as necessary.”	Completeness (compare with the statement in Para 2.2).	X			
FR	96		To replace “quality and economic elements” by “quality, social and economic elements”	To consider also social (or societal) elements, such as communication with the public, expectations from public, etc.	X			
JAP	97	Req. 3	Delete ‘Integrated’ on Requirement 3. Add a footnote as “In this document, the expression ‘management system’ is used interchangeably with ‘integrated management system’”.	Editorial.			X	This is in compliance with SF1

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
POL	98	4.1-4.16	General comment.	Requirements on the integrated management system are formulated in a very general manner, more specific guidance on this subject is needed describing particular constituents of the integrated management system and their interrelations and interfaces (also issuance a specific safety guide on this subject should be considered).	X	this will be in a specific guide		
FIN	99	Para. 4.1 a	<u>The management system shall integrate the elements of management of safety and security in a mutually supportive manner [as far as reasonably achievable].</u>	Insert new section after section 4.1 See 8. Bracketed text is optional.		Instead of “afara”, “keeping safety as an overriding priority (SF1)” would be better		
FR	100	4.2	The positions that constitute the senior management of the organization shall be defined in the management system.	No need for a separate requirement as it can be included in 4.3				
GER	101	4.2	“The positions that constitute the senior management of the organization shall be <u>clearly</u> defined in the management system.”	Harmonization of wording within the document. If there is no intention to distinguish between ‘defined’ and ‘clearly defined’, the latter should be used for strengthening the statements (compare with Paras 2.7, 4.3 and 4.12). The same issue applies to Paras 4.28, 4.34 and 4.55.			X	Superfluous as deleted in 2.7, will be deleted also in 4.3 and 4.12

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	102	4.3	The management structures, responsibilities and accountabilities shall be clearly defined in the management system. <u>In particular:</u> - The relationship of the organization to other organizations, including its 'parent organization (if any) <u>and to the regulatory body,</u> - <u>The positions that constitute the senior management of the organization</u> shall also be clearly defined in the management system.	Clarifications To compensate for deletion of 4.3	X			
FR	103	4.5	The arrangements made by the senior management for the management for safety in order to achieve high level safety performance shall be described in the management system.	No need for a separate requirement as it can be inserted in 4.7	X			
UK	104	4.5	4.5. The arrangements made by the senior management for the management for safety in order to achieve high-level safety performance shall be described in the management system.	Draft reads awkwardly.	X see above			
USA	105	4.5	4.5. The arrangements made by the senior management for the management for safety in order to achieve high-level safety performance shall be described in the management system.	Unnecessarily narrow. Deleting the text provides more flexibility.	X see above			
USA	106	4.7	4.7. The main aim <u>primary objective</u> of the management system shall be to achieve and enhance safety by:	Editorial suggestion	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	107	4.7	Move para 4.7 to after para 4.1. 4.7. The main aim of the management system shall be to achieve and enhance safety by:...	Enhancement of the main aim for management system much clearly.	X			
FR	108	4.7 b	Describing <u>the arrangements made for the management for safety in order to achieve high-level safety performance and the planned and systematic actions necessary to provide adequate confidence that all requirements mentioned in a. are satisfied;</u>	Clarification	X			
FR	109	47 c	c. Ensuring that safety has the highest priority <u>is taken into account in all decision making and is not compromised by these decisions.</u>	This may be too strong. What about security aspects for example ? Alternative wording to ensure consistency with 4.6	X			
UK	110	4.7.c	c. Ensuring that safety has the highest overriding priority in all decision making.	Consistency		See above		

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	111	4.8	4.8 could be combined with 4.4 : 4.4. Senior management shall establish, implement, assess and continually improve the management system in order to achieve the safety goals, objectives and fulfil regulatory and other requirements. <u>Senior management shall retain overall responsibility for the management system, even if an external organization is involved in the work of developing all or part of the management system.</u>		X			
UK	112	4.9	4.9. Senior management shall appoint an individual who has specific responsibility for coordinating the development and implementation of the management system. This individual shall have sufficient authority to discharge his responsibilities and shall have direct access to the senior management. This does not detract from the main accountability for safety, which lies with the management line.	Clarity.	X			
JAP	113	4.9/ line1 & 2	“individual” should be replaced in “Management representative”.	Clarification in accordance with ISO-9000.			X	In other standards it can be named differently

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	114	Para 4.12	In the integrated management system the organizational structure, responsibilities, levels of authority, processes and interfaces for all organizations, units and individuals shall be clearly defined and documented.	Clarity	X			
FR	115	4.13	To add at the end of the item : “In particular, potential cumulative effects of a series of organizational changes, even small or minor ones, on activities important for safety would be considered and appropriate measures taken.”	It is not enough to consider changes one by one isolated. In some cases, several or even a lot of changes may concern activities performed by one person or a group of people. Each one of these changes has minor effects or even not. But the accumulation of all changes has strong effects on the ability of people to perform their activities.	X			
FIN	116	Para 4.13	The integrated management system shall incorporate management of any change to processes or the organization that is important to safety. It shall include the evaluation and grading with regard to importance to safety and justification as well as communication.	Clarity	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	117	Para 4.14	Where appropriate, arrangements shall be established as part of the management system for independent review before decisions important to safety are made. The requirements for the type of independence and competence of the reviewers shall be defined.	Add. The requirements for the independence; external, internal unit or expert and requirements for the reviewers.	X			
GER	118	4.18 (4.17)	<u>Potential safety risks shall be identified and shall be the basis for grading.</u>	The basis for grading the application of the requirements for the MS is very important; therefor it should be listed as the first requirement. This requirement was in SPESS Step 6, but missing in Step 7.	X SEE BELOW proposal from FR to merge			
CAN	119	4.18	I suggest replacing the word 'principles' with 'criteria'. If 'principles' are to mean something other than criteria, then add 'criteria' to this requirement.				X	The principles are the basis for grading. They are not only parameters or criteria but also rules for grading.

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	120	4.18 4.19	<p>4.18. The grading principles shall be documented in the management system <u>and</u> 4.19. Grading principles shall take into account:</p> <p>a. The safety implication as well as the safety significance and complexity of each process, activity, structure, system, item of equipment, products and services;</p> <p>b. The hazards and the magnitude of the potential impact (risks) on safety associated with the safety, health, environmental, security, quality and economic elements of each activity;</p> <p>c. The possible consequences if a failure occurs or an activity is inadequately conceived or improperly carried out.</p>	<p>Combine 4.18 and 4.19</p> <p>Safety significance includes safety implications....</p>	X			
CAN	121			<p>Consider making grading an option to be applied in a manner commensurate with risk. Making this a requirement does not translate to a safer facility. If an organization takes the option to apply grading, then the criteria and process need to be defined.</p>			X	Not clear – If you want to modify something please make some clear proposition!

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	122	Para 4.19, a), b)	The grading principles shall take into account the allocation of the resources to the processes and the technical requirements for items important to safety: a) The safety implication as well as the safety significance and complexity of each process, activity, structure, system, item of equipment, products and services; b) The hazards and the magnitude of the potential <u>radiological</u> impact (risks) on safety associated with the safety, health, environmental, security, quality and economic elements of each activity;	The graded approach should include both aspect as in IAEA glossary. The impact is not only on safety but on the common objective of safety and security (see 1). “Radiological” is suggested in order to keep the emphasis on radiation and nuclear safety instead of, for example, economic impact; it may be omitted if considered unnecessary.		I agree with the comment but in these conditions why not keeping nuclear and radiation safety?		
POL	123	4.19.b	b. The hazards and the magnitude of the potential impact (risks) on safety <u>of each activity</u> associated with its <u>the</u> safety, health, environmental, security, quality and economic aspects <u>elements of each activity</u> ;	The original wording was rather complicated and consequently unclear.	X			
GER	124	4.19 c.	“The possible consequences if a failure <u>or unexpected event</u> occurs or an activity is inadequately conceived or improperly carried out.”	Completeness.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	125	4.20	1 st sentence: “Senior management shall develop the policies of the organization; they shall be documented <u>and shall provide for their documentation</u> in the management system.”	Clear and precise allocation of the senior management’s responsibilities.	X			
FR	126	4.21 4.22	4.21. Senior management shall establish arrangements for the development of goals, strategies, plans and objectives taking into account feedback and involving all levels in the organization. 4.22. The goals, strategies, plans and objectives of the organization shall be developed in such a manner that safety is not compromised by other factors.	Combine 4.21 and 4.22	X			
FR	127	4.23	The goals, strategies, plans and objectives shall be communicated and managed at all levels in the organization. All individuals doing work under the organization’s control shall be aware of and understand the policies and objectives <u>relevant to their tasks</u> , their contribution to the effectiveness of the management system and the safety implications of not conforming to its requirements.	The initial expectation is too broad.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	128	4.24	Senior management shall ensure that, <u>where relevant</u> , measurable objectives for implementing the goals, strategies and plans are established at various levels in the organization. The objectives shall include the improved management of radiation risks.	Clarification	X			
GER	129	4.24	2 nd sentence: “The objectives shall include the improved management of radiation risks.”	The term ‘improved management’ is not defined in the document. Thus, ‘improved’ should be deleted or it should be explained what improved management of radiation risks does mean.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	130	4.25/line 1 & 4.37/line 2	<p>What are differences between <u>regularly</u> & <u>periodically</u>? For example;</p> <p>4.25. Senior management shall ensure that the implementation of the plans is <u>regularly</u> reviewed against the objectives and that actions are taken to address deviations from the plans where necessary.</p> <p>4.37. ...These shall be appropriately validated before first use and <u>periodically</u> reviewed to ensure their adequacy and effectiveness.</p> <p>If there is no significant difference, it should be used as an integrated word as <u>periodically</u>.</p>	<p>Editorial.</p> <p>The same thing is found in 4.46 and R13.</p>	X			
FR	131	Requirement 6	<p>Senior management shall determine and provide the resources necessary to carry out the activities of the organization so that safety is not compromised <u>and that safety is continuously improved</u>.</p>	<p>Not compromising is not the sole objective as safety improvement is also an expectation.</p>	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	132	4.27	4.27. Senior management shall put in place arrangements to ensure that the organization has and maintains, <u>including through external support</u> , at each stage of the lifetime of the facilities and activities that give rise to radiation risks, the full range of resources and capabilities necessary to carry out all its activities and responsibilities to ensure safety.	Clarification to improve interface with 4.29	X			
UKR	133	Para 4.27, page 12	Following the words “capabilities necessary to carry out all its activities and responsibilities to ensure safety”, add <u>including periodical safety assessment of facilities and activities</u>	Resources and capabilities for safety assessment shall be provided for.			X	“All activities” cover also PSA
POL	134	4.27	4.27. Senior management shall put in place arrangements to ensure that the organization has and maintains, <u>at each stage of the lifetime of the facilities and in relation</u> activities that give rise to <u>radiation risks</u> , ...	Editorial correction to improve wording.			X	This is consistent with SF1 foot note 3 and IAEA glossary
FR	135	4.28	Senior management shall ensure that the competence requirements for individuals at all levels are defined and shall ensure that training is performed or other actions are taken to achieve and sustain the required level of competence. An evaluation of the effectiveness of the <u>training or</u> actions taken shall be conducted.	Clarification		We need to keep “is performed”		

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	136	4.28	Suitable proficiency shall be achieved and maintained.	Superfluous considering the previous sentence in 4.28				
GER	137	4.28	1 st sentence: “Senior management shall ensure that the competence requirements for individuals at all levels are <u>clearly</u> defined and ...”	See our comment on Para 4.2.			X	superfluous
FR	138	4.29		Locate 4.29 after 4.28 (same topic : capabilities), this will also enable 4.28, 4.30 and 4.31 to be together (same topic : competency)	X			
FR	139	4.29	Capabilities maintained <u>in-house</u> by the organization shall include effective leadership for safety at all levels, expertise to understand, <u>and</u> maintain and improve processes and the safety basis of facilities and activities..	Clarification	X			
FR	140	4.29	The organization shall maintain access to relevant expertise, including social and behavioural science	Superfluous (covered by 4.28)			X	4.28 does not cover that aspect
GER	141	4.30	“Senior management shall ensure that all individuals, including management, are competent to perform their assigned work and that they understand the <u>consequences importance and significance</u> for safety of their activities.”	Wording.	X			
POL	142	Req. 7	Requirement 7: Management of processes⁹ and activities	Editorial correction.	X			
GER	143	Requirement 7	Title of Requirement 7: “Management of processes <u>s</u> and activities”	Editorial; consistency with the text of the requirement.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	144	R7/prosess' footnote 9	<p>Clarify the red marked sentence.</p> <p>A process is an organized system of activities or tasks that uses resources (personnel, equipment, materials and machines, raw material and information) to transform entering elements (the inputs) in elements of exit (the outputs). It does not necessitate the use of a specific standard e.g. a standard issued by the International Organization for Standardization. Tasks or stand-alone activities can be organized without considering them as processes.</p>	<p>Clarification in accordance with the definition in ISO-9000.</p> <p>In the definition of 'process' in ISO-9000, it says that 'process set of interrelated or interacting activities which transforms inputs into output NOTE 1 Inputs to a process are <u>generally</u> outputs of other processes', so it is understanding that the proposed sentence is so specific. Therefore, this sentence should be deleted.</p>			X	I don't understand, this is consistent with the IAEA glossary
USA	145	4.33	<p>Revise 2nd sentence to state:</p> <p>4.33. Each process shall be developed and managed in such a way that safety is not compromised and requirements are fulfilled. The processes (including the feedback mechanisms) shall be implemented, assessed and continually improved.</p>	<p>Ensure that feedback mechanisms are considered.</p>	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	146	4.34	All process sequences and interfaces shall be defined so that safety is not compromised. Special attention shall be given to interfaces, <u>both within the organization and with external service provider</u>	To emphasize interface with contractors	X			
FR	147	4.34	with the line management, who have the overall responsibility for safety.	Superfluous and not fully true (see 2.7 ; overall responsibility lies with senior management : see 2.8 and 3.3)	X			
GER	148	4.34	1 st sentence: “All process sequences and interfaces shall be <u>clearly</u> defined so that safety is not compromised.”	See our comment on Para 4.2.			X	superfluous
FIN	149	Section 4.x	<u>The safety-security interfaces of processes shall be managed in a coordinated manner.</u>	Insert new section in connection with sections 4.33, 4.34 and 4.35: See 8.	X			
UKR	150	Para 4.35, page 13	Add new phrase. Safety reassessment of the facility or activity should be envisaged.	Any changes or implementation of new processes need to be substantiated by safety assessments.			X	Requirement 12 in SSR 2/2 covers PSR
FR	151	4.36		The meaning of “independent” could be clarified by a footnote (using 5.7 of GS-R-3 for example)	X			
FR	152	4.37	To add : <u>“People carrying out activities concerned by the process shall be involved in the validation.”</u>		X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FIN	153	Para 4.39, a)	Policy statements of the organization: the policy on safety shall state that <u>the fundamental</u> safety <u>objective</u> has an overriding priority;	See 2.	X			
FR	154	Requirement 8	Documentation <u>of the management system</u>	The overarching requirement is misleading	X			
FR	155	Requirement 8		Requirements 3 and 8 are both dealing with the management system and could be located together and rationalized to avoid overlaps/duplications			X	The structure has been kept as close as GS-R-3
POL	156	4.41/3	<p>Requirement 9: Measurement, assessment, evaluation and improvement.</p> <p>Measurement, assessment and evaluation of the management system shall be performed in order to continually improve safety performance.</p> <p>4.40. The effectiveness of the management system shall be monitored and measured to confirm the ability of the system to achieve the intended results and to identify opportunities for improvement.</p>	It is unclear what does “measurement ... of the management system” concretely mean and how it is to be performed (using performance indicators or somehow)?		This means measurement of the MS effectiveness		

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	157	4.40	The effectiveness of the management system shall be monitored and measured, <u>for example through performance indicators</u> , to confirm the ability of the system to achieve the intended results and to identify opportunities for improvement.	To compensate deletion of 4.52			X	No example in requirements
FR	158	4.42	Preventive actions to eliminate the causes of potential non-conformances shall be determined and taken <u>in a timely manner</u> .	For consistency with corrective actions	X			
GER	159	4.43	“The status and effectiveness of all corrective and preventive actions shall be monitored, <u>documented</u> and reported to management at an appropriate level in the organization.”	Clarification and completion.	X			
FR	160	4.44 4.45	4.44 Self-assessment <u>shall be performed by individuals at all levels in the organization shall be used</u> to prevent, identify and correct weaknesses that hinder the achievement of the organization’s objectives, as well as to improve the management system and enhance the safety culture and the effectiveness of processes and activities. Self assessment shall be performed by senior management and by individuals at all levels in the organization. 4.45. Self assessments or other tools <u>They</u> shall also be used to identify strengths and learn from them to improve.	Merge both paragraphs	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
POL	161	4.45	4.45. Self-assessments or other tools shall also be used to identify <u>weaknesses and</u> strengths and learn from them to improve.	The word “weaknesses” should be added, as self-assessments should be aimed at identifying both weaknesses and strengths.	X	See above		
UK	162	4.46	c. Leadership <u>at all levels</u> and safety culture.	Senior managers should not be not above this.	X			
GER	163	4.46	1 st sentence: “Independent assessments <u>such as internal or external audits [17]</u> shall be conducted regularly on behalf of senior management in order to ...”	Audits are an essential element of independent assessments of management systems. Therefore, they should be explicitly mentioned here. In November 2012, the German Nuclear Safety Standards Commission (KTA) has adopted the new national standard KTA 1402 “Integrated Management Systems for the Safe Operation of Nuclear Power Plants” according to which audits shall be regularly conducted for the purposes stated in this para. The international standard ISO 19011:2011 “Guidelines for auditing management systems” provides guidance on the conduct of internal or external management system audits. We recommend to include a new reference [17] to this document.			X	NO example in a Requirement

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
USA	164	4.46.c.	Modify bullet c: List Leadership and Safety Culture separately (as c and d). 4.46 c. Leadership and safety culture. ; d. Safety culture.	Leadership is more than safety culture.	X	comments accepted but we cannot say that leadership is more than SC! All we can say is that there is no strong SC without Leadership		

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	165	4.46. c. Requirement 13	<p>4.46. Independent assessments shall be conducted regularly on behalf of senior management in order to evaluate the effectiveness of the management system and all processes and activities specified in the management system and identify opportunities for improvement. Such independent assessment shall critically evaluate:</p> <p>a. The fulfilment of requirements, goals, strategies, plans and objectives;</p> <p>b. The adequacy of work performance in achieving safety;</p> <p>c. Leadership and safety culture.</p> <p>Requirement 13: Assessment of safety culture and leadership for safety.</p> <p>Senior management shall periodically perform independent assessments and self- assessments of safety culture and leadership for safety.</p> <p>5.6. The assessment of leadership and safety culture shall make use of several diverse methods</p> <p>5.7. The results of such assessments shall be communicated to all levels in the organization</p> <p>5.8. The results of leadership and safety culture assessments shall be</p>	<p>Clarification of the scope.</p> <p>The <u>independent assessments</u> stated in para 4.46c are just only focused on leadership, not on safety culture. On the other hands, the <u>independent assessments</u> stated in requirement 13, para.5.6. and 5.8 are only focused on safety culture, not leadership. Therefore, the scope of each requirement including related paragraph for the independence assessments should be clearly separated.</p>			X	<p>Independent assessment must be done to assess effectiveness of the IMS, <u>AND</u> Also on leadership and safety culture together as leadership is fundamental to build a strong safety culture</p>

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	166	4.46	To add item d :”The adequacy of resources (including staffing, working environment, tools, working conditions, time, equipment, etc.) necessary for people to be able to achieve the highest level of human performance regarding safety.”	Result of work performance is not enough to be assessed. For people to be able to behave in compliance with safety expectations, people need adequate resources in staff, time to achieve the task, tool adapted, information, etc.	X			
GER	168	4.48	1 st sentence: “An independent organizational entity or an external independent organization shall be established or available with the responsibility for conducting independent assessments.”	The proposed extension covers both internal and external assessments. In the current wording there is no requirement for the independence of the organizational entity. It should be made clear that an independent assessment can not be conducted by the senior management of the licensee or regulatory body himself.			X	???4.46 is clearly mentioning independent assessment as well as 4.47 It is not true that an independent assessment cannot be conducted internally. Most of the utilities have now a Nuclear Oversight organization independent from the line management and reporting directly to the senior management.

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
UK	168	4.50	4.50. The review shall at least cover <u>all significant aspects of safety performance including:</u> <u>d. Operational experience feedback including</u> lessons learned from other organizations including good practices;	The review may have the objective of improving the management system, but should be focused first on the overall performance in leadership and management for safety, not just the system. Reviews that instead start by looking at the management system itself are generally too narrow.	X			
USA	169	4.50	4.50. The review shall, at least <u>a minimum,</u> cover:	Editorial suggestion		X see above		
GER	170	4.50	Insert new bullet after c.: “The review shall at least cover: ... <u>d. Lessons learned from previous operating experience;</u> <u>e. Lessons learnt form other organizations including good practices;</u> <u>f. Opportunities for improvement.”</u>	Backflow of own experiences should also be part of the review (see Para 4.53).	X see above merging d and e			
FR	171	4.52	Performance indicators shall be used in order to monitor the effectiveness of the management system and to confirm the ability of the processes or activities to achieve the intended results. Performance indicators shall be trended and evaluated at regular intervals.	No need to impose performance indicators. Could be inserted in 4.40 as a means to measure effectiveness			X	See 4.40 SSR2/2 already requires PI. Reworded : suitable performance indicators

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	172	4.53	<p><u>Introduction of 4 bullets:</u> The management system shall include a systematic operating experience feedback process as well as provisions for the evaluation of lessons learned. This shall be done by:</p> <ul style="list-style-type: none"> - using feedback from other organizations, both internal and external; - through the use of technical advances and research; - through the sharing of knowledge and experience; and - through the use of techniques that identify good practices. 	Better reading and thus better understanding	X			
FR	173	Requirement 10	<p>Interactions with interested parties¹⁰ shall be identified, continuously reviewed in an open and transparent manner and integrated in the management system when relevant.</p>		X			
FR	174	4.54	<p>Senior management shall acknowledge and make arrangements for identifying, understanding and implementing legal and regulatory requirements imposed on the organization <u>for interaction with interested parties</u>. Such requirements shall be integrated in the management system in a systematic way in order to facilitate implementation, review and change management.</p>	Clarification	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	175	4.55	For <u>implementing legal or regulatory requirements or voluntary initiatives fo interactions with interested parties</u> , Senior management shall make arrangements to ensure that <u>associated processes agreements with interested parties</u> are defined and implemented. Such arrangements shall be integrated in the management system.	To clarify that interactions with interested parties may also be conducted on a voluntary basis by the organization, even if no mandatory interaction is required.	X			
GER	176	4.55	1 st sentence: “Senior management shall make arrangements to ensure that agreements with interested parties are <u>clearly</u> defined and implemented.”	See our comment on Para 4.2.		...should be defined, understood and implemented.		Clearly is too vague and can vary from one person to another.
FR	177	Requirement 11	The licensee shall put in place effective arrangements with suppliers to <u>specify</u> , monitor and control the supply of items, products and services that may affect safety.	Clarification	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
CAN	178	Requirement 11	"An intelligent customer is defined as an organization (or individual) that has the competence to specify the scope and standard of a required product or service and subsequently assess whether the supplied product or service meets the specified requirements.	Absence of an explicit reference to the 'Intelligent Customer' concept, especially under the: Management of suppliers' section. The 'Intelligent Customer' concept is referenced by IAEA SSG-12 and GS-G-3.5. Since GSR Part 2 is the overarching document on leadership, management and safety, the concept of 'Intelligent Customer' logically fits under its umbrella and needs to be highlighted as a stand-alone concept.	X	Together with previous comment: "the licensee, as an intelligent customer, shall put in place" Put the definition in a foot note		
FR	179	4.59	The following requirements shall, as a minimum, be controlled through the management system <u>shall include arrangement for :</u>	Alternate wording	X			
FIN	180	Para 4.59	The following requirements shall, as a minimum, be controlled through the management system: a. Selection of suppliers of items, products and services on the basis of effectiveness of their own management system and performance; aa. qualification of suppliers of items, products and services	Qualification is an own topic to be reviewed and cannot be made only through management system.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	181	4.59 b	b. Specification of contractual requirements, <u>including safety related requirements;</u>	Clarification	X			
FIN	182	Para 4.60	The licensee shall explicitly define the graded requirements for the suppliers in its management system. Those suppliers that shall comply with this requirements document and those that may fulfil the requirements by other means such as a quality plan.	It is important to specify the graded requirements for the supplier. Those that shall apply.		The licensee shall explicitly define the graded requirements for the suppliers in its management system. For the rest of the proposed text, it has been established in the DPP that this document does not apply to vendors and suppliers. We cannot substitute or dilute the responsibility of the licensee. (confirmed by NUSSC chair last meeting)		
FR	183	5.1	5Desired and expected attitudes and behaviours, <u>including from suppliers,</u> that result in a strong safety culture shall be developed and integrated in the management system.	To address contractors	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
USA	184	5.1	5.1. Desired and expected attitudes and behaviours that result in a strong safety culture shall be developed—and integrated—in supported by the management system.	Integrated into the management system, is unclear. Safety culture behaviors should be in the procedures not in the management system.	X			
FIN	185	Para 5.1 a	<u>[Desired and expected attitudes and behaviours that result in a strong] security culture shall be integrated into safety culture.</u>	Insert new section after section 5.1: See 1 and 8. Bracketed text is optional.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
JAP	186	5.2	<p>5.2. All individuals in the organization, from the senior management down, shall contribute to promoting and fostering a strong safety culture, by implementing and reinforcing: <u>including but not limited to:</u></p> <p>a.</p>	<p>In para 5.2, it says that elements a. through k. shall be considered to establish a strong safety culture, but these aren't covered all of the activities such as 'qualifications and training' and 'control of safety practices', which are written in INSAG-4.</p> <p>Moreover, there are mixing with a general concept (e.g. b. and k) and a detail action (e.g. d), so it is hard to require all of activities in the same paragraph to all organizations even if it seems that all of elements for safety culture written in INSAG-4 are stated into concretely.</p> <p>Therefore, these elements aren't limited and obligated activities so these should be listed as examples.</p>			X	This list does not correspond to activities but to values and expected behaviours that are the foundation of safety culture

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
POL	187	5.2.b	b. Ownership of safety;	It is unclear what does the “ownership of safety” specifically mean in this context?	X	This means to feel responsible for protecting people and the environment		
GER	188	5.2 k.	“ Safety-driven, conservative decision making in all activities (see Ref. [18]).”	Without further explanation, the meaning of the term ‘conservative’ might not be sufficiently clear. We recommend to add a self-explanatory term like ‘safety-driven’ in order to facilitate understanding. Since conservative decision making is discussed in Section 3.3 of INSAG-15 “Key Practical Issues in Strengthening Safety Culture” (2002), a new reference [18] to this publication should be included here.	X			
FR	189	5.3	The management system shall make provision to ensure the involvement and visibility of all management, from senior managers down to supervisors, in field activities.	May be better in a safety guide			X	This is really WHAT has to be done by managers at all levels and if it is not in the management system it will not be done....
GER	190	5.3	“... to ensure the involvement and visibility of all <u>levels of management in the organization</u> , from senior managers down to supervisors ...”	Wording.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	191	5.5	The management system shall require that knowledge of social and behavioural science be utilized to help achieve a high level of performance and encourage good practices.	May be better in a safety guide	X			
UK	192	Requirement 13	Senior management shall periodically perform commission independent assessments and self-assessments of safety culture and leadership for safety.		X			
USA	193	Requirement 13	Requirement 13: Assessment of safety culture and leadership for safety. Senior management shall periodically perform authorize independent assessments and self-assessments of safety culture and leadership for safety.	The word “Authorize” better describes senior management’s role.		X see above		
FR	194	5.6	The assessment of leadership and safety culture shall make use of several diverse methods.	Too vague	X should be in a guide to describe assessment tools			
GER	195	5.7	“The results of such assessments shall be communicated <u>in an open and transparent manner</u> to all levels in the organization.”	Self-explanatory.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
FR	196	5.7 5.8	5.7. The results of such assessments shall be communicated to all levels in the organization and 5.8. The results of leadership and safety culture assessments shall be acted upon to ensure improvements and to promote a learning organization.	Combine both	X			
UK	197	Contributors	Mullins, P. DECC -ONR, United Kingdom	ONR is definitely not part of DECC!	X			
GER	198	Ref. [6]	INTERNATIONAL ATOMIC ENERGY AGENCY, Safety of Research Reactors, IAEA Safety Requirements <u>Standards</u> Series No. NS-R-4, published Thursday, July 28, IAEA, Vienna (2005).	Use uniform citation of publications issued in the IAEA Safety Standards Series (compare with Ref. [1] to [5]).	X			
GER	199	Ref. [7]	INTERNATIONAL ATOMIC ENERGY AGENCY, Safety of Nuclear Fuel Cycle Facilities, IAEA Safety Requirements <u>Standards</u> Series No. NS-R-5, published Tuesday, December 02, IAEA, Vienna (2008).	See comment on Ref. [6].	X			
GER	200	Ref. [12]	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, Environmental Management Systems: Specifications <u>Requirements</u> with Guidance for Use, ISO 14001: 2004 1996 , ISO, Geneva (2004 1996).	The current version of ISO 14001 was published in 2004 (with additional corrigendum in 2009). The previous version was withdrawn.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	201	Ref. [13]	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, Quality Management Systems: Requirements, ISO 9001:2008 0 , ISO, Geneva (2008 0).	The current version of ISO 9001 was published in 2008 (with additional corrigendum in 2009). The previous version was withdrawn. For the purposes of ISO 9001:2008, the terms and definitions given in ISO 9000:2005 apply. Therefore, the latter document should also be cited in the list of references.	X			
GER	202	Ref. [14]	Either delete this reference or insert proper citation in the text.	Ref. [14] is not cited in the document.	X			
GER	203	Ref. [15]	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, Quality Management Systems: Fundamentals and Vocabulary, ISO 9000:2005, ISO, Geneva (2005).	New reference to be included. See our related comments on Para 1.11 and Ref. [13].	X			
GER	204	Ref. [16]	INTERNATIONAL ATOMIC ENERGY AGENCY, Nuclear Security Culture, IAEA Nuclear Security Series No. 7, IAEA, Vienna (2008).	New reference to be included. See our related comment on Para 1.11.	X			
GER	205	Ref. [17]	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, Guidelines for auditing management systems, ISO 19011:2011, ISO, Geneva (2011).	New reference to be included. See our related comment on Para 4.46.	X			
GER	206	Ref. [18]	INTERNATIONAL NUCLEAR SAFETY ADVISORY GROUP, Key Practical Issues in Strengthening Safety Culture, INSAG-15, IAEA, Vienna (2002).	New reference to be included. See our related comment on Para 5.2 k.	X			

		COMMENTS BY REVIEWER			RESOLUTION			
COUNTRY	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
GER	207	1.6	... e ontinually <u>continuously</u> improve performance.	<p>"continuous" indicates duration without interruption. "continual" indicates duration that continues over a long period of time, but with intervals of interruption.</p> <p>The same difference refers to "continuously" and "continually"</p> <p>In the context of the requirements of DS 456 the terms "continuous" and "continuously" should be used.</p> <p>The term "continually" should be used as synonym for "periodically"</p>	X			
		1.7	... and e ontinually <u>continuously</u> improve:					
		2.2	... that e ontinually <u>continuously</u> improve safety culture.					
		3.7	... commitment to <u>continuous</u> improvement. Leaders ...					
		4.4	... e ontinually <u>continuously</u> improve the management system ...					
		4.10	... and e ontinual <u>continuous</u> improvement of the management system.					
		4.11	... and e ontinual <u>continuous</u> improvement of the management system.					
		4.33	... and e ontinually <u>continuously</u> improved.					
		4.33	... to e ontinually <u>continuously</u> improve safety performance.					
		RQ 9	Requirement 12: C ontinual <u>C</u> ontinuous improvement of safety culture (This is also part of the CONTENTS and must be changed there)					
		RQ 12	... to the e ontinual <u>continuous</u> improvement of safety culture, ...					
		RQ 12	... the organization e ontinually <u>continuously</u> seek to develop ...					
		5.2 f						