

DS462

TABLE OF COMMENTS RESOLUTION

Comments from Argentina, Germany NUSSC,
Germany WASSC, France, Finland, Poland, Japan
NUSSC, Japan WASSC, USA, Switzerland, Canada,
Ukraine, ENISS and WNA

Addenda to the IAEA Safety Requirements:

- GSR Part-1 on Governmental, Legal and Regulatory Framework for Safety
- NS-R-3 on Site Evaluation for Nuclear Installations
- SSR-2/1 on Safety of Nuclear Power plants: Design
- SSR-2/2 on Safety of Nuclear Power plants: Commissioning and Operation
- GSR Part 4 on Safety Assessment for Facilities and Activities

Status

STEP 7: first review by the Review
Committees (NUSSC, RASSC,
TRANSSC, WASSC)
Information of NSGC

Addendum to NS-R-3

Lesson learned	Current text		Proposal following NUSSC WG meeting held from 5 to 8 March 2013				Proposed Resolution of the Committees Meetings
Germany WASSC	1.9 Additional modification not initially proposed by the Secretariat	<p>1st and 2nd sentence: “Previous safety standards on this subject related to land based, stationary thermal neutron power plants. This Safety Requirements publication has been extended to cover a more comprehensive range of nuclear installations: land based, stationary nuclear power plants and research reactors, as well as nuclear fuel cycle facilities, including but not limited to enrichment plants, processing plants, independent spent fuel storage facilities and reprocessing plants.”</p> <p>Assign a new footnote No. 2 to the term ‘nuclear installations’ with the following text of the footnote: “² 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>last sentence: “... In some instances in this publication, a requirement is stated to apply to nuclear power plants. In these cases, the requirements are most appropriate for</p>	A list of nuclear installations covered by NS-R-3 should be provided in a footnote (see our proposal), taking into account the revised definition of the term ‘nuclear installations’ which has been endorsed at the 32 nd CSS meeting in October 2012 (see CSS presentation to agenda item 6.1). 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”.	X			<p>1.9. Previous safety standards on this subject related to land based, stationary thermal neutron power plants. This Safety Requirements publication has been extended to cover a more comprehensive range of nuclear installations*:-land based, stationary nuclear power plants and research reactors, as well as nuclear fuel cycle facilities, including but not limited to enrichment plants, processing plants, independent spent fuel storage facilities and reprocessing plants. In some instances in this publication a requirement is stated to apply to nuclear power plants. In these cases, the requirements are most appropriate for nuclear power plants, but they may also apply to other nuclear installations using a graded approach.</p> <ul style="list-style-type: none"> Footnote referring to the revised definition of nuclear installations in the Safety Glossary

		nuclear power plants, but they may also apply to other nuclear installations using a graded approach on the basis of their potential radiological hazards and non-radiological hazards (e.g. the presence of flammable, explosive, toxic or corrosive materials) . For sites at which nuclear installations of different types are collocated, particular consideration shall be given to the use of a graded approach so that site evaluation is commensurate to the most hazardous nuclear installation.”	Guide DS433 “Safety Aspects in Siting for Nuclear Installations” (revision of SG-S9, draft version 00.17 dated 6 May 2013). The basis for grading the application of the requirements is very important. Therefore, it should also be addressed here.	X accepted but only with the mention of a graded approach		
Germany WASSC	1.13 Additional modification not initially proposed by the Secretariat	“This publication is concerned mainly with severe events of low probability that relate to the siting of nuclear installations and that have to be considered in designing a particular nuclear installation. If events of lesser severity but higher probability make a significant contribution to the overall risk, they should shall also be considered in the design of the nuclear installation.”	Strengthening the concept of defence in depth in the design of a nuclear installation.	X The section 1 is not meant to establish requirements		1.13. This publication is concerned mainly with severe events of low probability that relate to the siting of nuclear installations and that have to be considered in designing a particular nuclear installation. If events of lesser severity but higher probability make a significant contribution to the overall risk, they will also need to should also be considered in the design of the nuclear installation.
Germany WASSC	3.53 Additional modification not initially proposed by the Secretariat	“In the design of systems for long term heat removal from the core, site related parameters, such as the following, should shall be considered: ...”	Strengthening the concept of defence in depth in the design of a nuclear installation.	X		3.53. In the design of systems for long term heat removal from the core, site related parameters, such as the following, shalleud be considered:
Germany WASSC	General	Note: In numerous paras in NS-R-3, especially in Section 2, requirements are provided as “should” statements. Please check carefully in each individual case whether they need to be replaced by “shall” statements.	In IAEA Safety Requirements, usually “shall” statements are to be provided.	X		Changes from “should” to “shall” to be incorporated in 2.1, 2.7, 2.8, 2.11, 2.13, 2.15, 2.18 (two should), 2.20, 4.8, 4.11, 4.14, 6.3, 6.4
Lessons learned 8.1	2.5 Proposed sites for nuclear installations shall be examined with regard to the frequency and severity of external natural and human induced events and phenomena that could affect the safety of the installation.	2.5 Proposed sites for nuclear installations shall be examinedevaluated with regard to the frequency and severity of external natural and human induced events and their co-occurencesphenomena that could affect the safety of the installation. New paragraph after 2.5: 2.5b Site specific design and safety assessment parameters shall be periodically evaluated based on the updated information, knowledge and methodologies and their safety implications shall be evaluated.				2.5 Proposed sites for nuclear installations shall be examinedevaluated with regard to the frequency and severity of external natural and human induced events and credible combinations of these eventsphenomena that could affect the safety of the installation. New paragraph after 2.5a: 2.5b Site specific design and safety assessment parameters shall be periodically evaluated based on the lessons learned, the updated information,

							knowledge and methodologies, and their safety implications shall be evaluated.
Japan	2.1 and 2.5	<p>2.1.(a) The effects of external events occurring in the region of the particular site (these events could be of natural origin or human induced);</p> <p>2.5. Proposed sites for nuclear installations shall be evaluated with regard to the frequency and severity of external natural and human induced events and</p>	<p>Clarification for terminologies.</p> <p>Wording of “external events” in Sec.2.1.(a) and “external natural and human induced events” in Sec.2.1 and Sec.2.5.</p>		This is consistent as external events includes both external natural events and human induced events		
USA 1	2.5	<p>Modify paragraph to read:</p> <p>Proposed sites for nuclear installations shall be evaluated with regard to the frequency and severity of external natural and human induced events. Causality and likelihood shall be considered when postulating concurrent hazards that could affect the safety of the installation.</p>	<p>The sentence as constructed is not clear. As written, I think it makes a user evaluate every “co-occurrence” of external natural events and human induced events. Some of these co-occurrences will be remote (e.g. an aircraft crash co-occurring with a tsunami). Some text needs to be added to limit the investigation to ones that are credible to consider.</p> <p>Also, “co-occurrence” seems awkward; consider “concurrent events.”</p> <p>Proposed words use concepts and wording consistent with SSR 2-1 Requirement 17.</p>		OK. See comment from Canada		
Canada	2.5 and 2.5b	<p>2.5 Proposed sites for nuclear installations shall be evaluated with regard to the frequency and severity of external natural and human induced events and their co-occurrences that could affect the safety of the installation.</p>	<p>The change to “their co-occurrences” is not clear.</p> <p>Suggest using a clearer terminology: For example:</p> <p>2.5 Proposed sites for nuclear installations shall be evaluated with regard to the frequency and severity of external natural and human</p>	X			

		<p>New paragraph after 2.5:</p> <p>2.5b Site specific design and safety assessment parameters shall be periodically evaluated based on the updated information, knowledge and methodologies and their safety implications shall be evaluated.</p>	<p>induced events and credible combinations of these events that could affect the safety of the installation.</p>				
USA 2	2.5a and b	<p>Modify paragraph to read:</p> <p>2.5. Proposed sites for nuclear installations shall be evaluated with regard to the frequency and severity of external natural and human induced events and their co-occurrences that could affect the safety of the installation.</p> <p>2.5a From the characterization of the hazards resulting from the external events:</p> <ul style="list-style-type: none"> The frequency and severity information regarding hazards and risk consequence shall be used in establishing the design basis hazard level for the nuclear installation” Account shall be taken of uncertainties in the design basis hazard level; and The assessment level hazard to meet safety margins objectives shall be established for the installation. <p>2.5b Site specific design and safety assessment parameters shall be periodically evaluated based on lessons learned, updated information, updated technologies knowledge-and methodologies, and their safety implications shall be evaluated.</p>	<ul style="list-style-type: none"> Need to include risk (or hazard) consequence, as severity may not appropriately reflect magnitude of hazard or risk consequence. Lessons learned based on events or operational experiences are important in the periodic assessment of safety. Updated technologies need to be included, as certain technologies used can be superseded. 	X 2.5a covered below in the table			
Argentina	2.5 and 2.5b	2.5 Proposed sites for nuclear installations shall be evaluated with regard to the			X	It is not necessarily	

		frequency and severity of external natural and human induced events and their simultaneous occurrences that could affect the safety of the installation. New paragraph after 2.5: 2.5b Site specific design and safety assessment parameters shall be periodically evaluated based on the updated information, knowledge advancement, technology and methodologies and their safety implications shall be evaluated.					simultaneous. This can also be events in sequence X Here methodology is more appropriate than technology	
JAPAN WASSC 2	2.5b	Site specific design and safety assessment parameters shall be periodically evaluated reviewed based on the updated information, knowledge and methodologies. <u>Their</u> safety implications shall be evaluated.	1) Clarification Does “be periodically evaluated” mean “be periodically reviewed”? 2) To enhance understanding of this article				X The title of NS-R-3 is about site evaluation	
<i>Lessons learned</i> 8.1	3.55. If the hazards for the nuclear installation are unacceptable and no practicable solution is available, the site shall be deemed unsuitable	Modify paragraph 3.55: If the hazards for the nuclear installation are unacceptable and no practicable solution is available for protection of the nuclear installation with sufficient safety margins , the site shall be deemed unsuitable or no longer suitable .		No Change Modify paragraph 3.55: If the hazards for the nuclear installation are unacceptable and no practicable solution is available for protection of the nuclear installation with sufficient safety margins, the site shall be deemed unsuitable or no longer suitable.				
Finland	2.2 and 3.47	For consistency with 3.55 Add at the end of 2.2 <u>or no longer suitable.</u> Add at the end of 3.47 <u>or no longer suitable.</u>		X				2.2. If the site evaluation for the three aspects cited indicates that the site is unacceptable and the deficiencies cannot be compensated for by means of design features, measures for site protection or administrative procedures, the site shall be deemed unsuitable or no longer suitable . This applies also to 2.25, 2.28, 3.36, 3.40, 3.47, 3.50, 3.51 and 3.55
Germany WASSC	2.2 3.36 3.40 3.47	“If the site evaluation for the three aspects cited indicates that the site is unacceptable and the deficiencies cannot be compensated for by means of design features, measures for site protection or administrative procedures, the site shall be deemed unsuitable <u>or no longer suitable</u> .” Implement the same changes in 3.36, 3.40 and 3.47	Clarification and consistency with the wording in Para 3.55 is recommended.	X				
Japan	3.51	... If the effects of such phenomena and occurrences would produce an unacceptable hazard and if no	Completeness.	X				

		practicable solution is available, the site shall be deemed unsuitable <u>or no longer suitable</u> .	Adding “or no longer suitable” after “the site shall be deemed unsuitable” is proposed for the paragraph 3.55. Adding this words and phrases is necessary for the last sentence of 3.51 to keep consistency with the proposed modification of 3.55 shown before.				
Japan	3.55	If the hazards for the nuclear installation are unacceptable and no practicable solution is available for protection of the nuclear installation with <u>adequate sufficient</u> safety margins, the site shall be deemed unsuitable or no longer suitable.	Clarification. It is unclear to include sufficient safety margins for site evaluation. The same comment in SSR-2/1 para 5.29(d).		X	To be adequate, they would need to be sufficient	
<i>Lessons learned</i> 10.1			New paragraph after 2.13 2.13a For assessing the feasibility of the implementation of the emergency plans, all nuclear installations to be installed on the site shall be considered.				2.13. For nuclear power plants, the total nuclear capacity to be installed on the site shall be determined as far as possible at the first stages of the siting process. If it is proposed that the installed nuclear capacity is significantly increased to a level greater than that previously determined to be acceptable, the suitability of the site shall be re-evaluated, as appropriate. New paragraph after 2.13 2.13a For assessing the feasibility of the implementation of the emergency plans, all nuclear installations to be installed on the site shall be considered.
Argentina	2.13a	2.13a For assessing the feasibility of the implementation of the emergency plans, all nuclear installations to be installed on the same site shall be considered. Similarly, for a site where there are nuclear installations and at least a new one is intended to be erected. (in line with the following para)			X	Also THE site means the same site	
Japan	2.13 Modification not initially proposed by the Secretariat	For nuclear power plants, the total nuclear capacity to be installed on the site should <u>shall</u> be determined as far as possible at the first stages of the siting process. If it is proposed that the installed nuclear capacity be is significantly increased to a level greater than that previously determined to be acceptable, the suitability of the site shall be re-evaluated, as appropriate.	Editorial. To enhance understanding of this article.		X	Shall already covered above in the table	

Japan	2.13a	For assessing the feasibility of the implementation of the emergency plans, all nuclear installations <u>to be installed</u> on the site shall <u>should</u> be considered <u>as far as possible</u> .	Clarification. To consist with para. 2.13., stated as ‘as far as possible’ for all nuclear installations.		X	“Consider’ de facto means “as far as possible”	
Canada	2.13a	2.13a For assessing the feasibility of the implementation of the emergency plans, all nuclear installations to be installed on the site shall be considered.	Clause 2.13 does not specify new or existing installations. It simply speaks to total installed capacity. 2.13a should maintain this spirit and speak to all installations on the site whether existing or new.		X	2.13 also use “to be installed”	
Lessons learned 10.1	3.51. The region shall be investigated for installations (including installations within the site boundary) in which flammable, explosive, asphyxiant, toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with that, if released under normal or accident conditions, could jeopardize the safety of the installation. This investigation shall also include installations that may give rise to missiles of any type that could affect the safety of the nuclear installation. The potential effects of electromagnetic interference, eddy currents in the ground and the clogging of air or water inlets by debris shall also be evaluated. If the effects of such phenomena and occurrences would produce an unacceptable hazard and if no practicable solution is available, the site shall be deemed unsuitable.	Modify existing para 3.51 3.51. The region shall be investigated for installations (including installations within the site boundary, including collocated NPP units) in which flammable, explosive, asphyxiant, toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with that, if released under normal or accident conditions, could jeopardize the safety of the installation. This investigation shall also include installations that may give rise to missiles of any type that could affect the safety of the nuclear installation. The potential effects of electromagnetic interference, eddy currents in the ground and the clogging of air or water inlets by debris shall also be evaluated. If the effects of such phenomena and occurrences would produce an unacceptable hazard and if no practicable solution is available, the site shall be deemed unsuitable.	Modify existing para 3.51 3.51. The region shall be investigated for installations (including installations within the site boundary, such as including collocated NPP units) in which flammable, explosive, asphyxiant, toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with that, if released under normal or accident conditions, could jeopardize the safety of the installation. This investigation shall also include installations that may give rise to missiles of any type that could affect the safety of the nuclear installation. The potential effects of electromagnetic interference, eddy currents in the ground and the clogging of air or water inlets by debris shall also be evaluated. If the effects of such phenomena and occurrences would produce an unacceptable hazard and if no practicable solution is available, the site shall be deemed unsuitable <u>or no longer suitable</u> .				
Argentina	3.51	3.51. The region shall be investigated for installations (including installations within the site boundary, including collocated NPP units) in which flammable, explosive, asphyxiate , toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with that, if released under normal or accident conditions, could jeopardize the safety of the installation. This investigation shall also include installations that may give rise to missiles of any type that could affect the safety of the nuclear installation. The potential effects of electromagnetic interference, eddy currents in the ground and the			X	Asphyxiate is a verb. Asphyxiant is correct	

		clogging of air or water inlets by debris shall also be evaluated. If the effects of such phenomena and occurrences would produce an unacceptable hazard and if no practicable solution is available, the site shall be deemed unsuitable. Reflexion: for a Requirement this list seems too comprehensive and more appropriate for a dedicated Safety Guide.				True indeed, but this current version was not submitted for comment	
France 5	3.51	3.51. The region shall be investigated for installations (including installations within the site boundary, including collocated NPP units nuclear installations) in which flammable, explosive, asphyxiant, toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with that, if released under normal or accident conditions, could jeopardize the safety of the installation.	To avoid focusing on NPPs only.			X but this would be a duplication of the mention of collocated installations	
Japan	3.51	The region shall be investigated for installations (including installations including and collocated NPP units within the site boundary) in which flammable, explosive, asphyxiant, toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with that, if released under normal or accident conditions, could jeopardize the safety of the installation....	Clarification. Relationship between 'including installations' and 'including_collocated NPP units' is complicated and unclear.			X And doesn't 'work as' installations' would include NPP	
Germany WASSC	3.51	1 st sentence: "The region shall be investigated for installations (including installations within the site boundary, including or collocated NPP units within the site boundary) in which flammable, explosive, asphyxiant, toxic, corrosive or radioactive materials are stored, processed, transported and otherwise dealt with ..." last sentence: "If the effects of such phenomena and occurrences would produce an unacceptable hazard and if no practicable solution is available, the site shall be deemed unsuitable or no longer suitable. "	Simplify wording. See our related comment on Para 2.2.	x	Already addressed above	X The term installations includes NPP	

Canada	3.51 first sentence	The region shall be investigated for installations (including installations within the site boundary, including such as collocated NPP units) in which ...	The second instance of the word “including” does not make sense in the first sentence. Suggest replacing with “such as”	X	OK. This avoids using twice “including”		
Lessons learned 10.1 & 11.1	2.7. The hazards associated with external events that are to be considered in the design of the nuclear installation shall be determined. For an external event (or a combination of events) the parameters and the values of those parameters that are used to characterize the hazards should be chosen so that they can be used easily in the design of the installation. 3.21. The hazards for the site due to flooding shall be derived from the model.	Modify existing paragraph 2.7: 2.7. The hazards associated with external events that are to be considered in the design of the nuclear installation and for its safety assessment shall be determined. For an external event (or a combination of events) the parameters and the values of those parameters that are used to characterize the hazards should be chosen so that they can be used easily in the design of the installation and for its safety assessment . Modify existing paragraph 3.21: 3.21. The hazards for the site due to flooding shall be derived based on suitable from the models.	Modify existing paragraph 2.7: 2.7. The hazards associated with external events that are to be considered in the design of the nuclear installation and for its safety assessment shall be determined. For an external event (or a combination of events) the parameters and the values of those parameters that are used to characterize the hazards should be chosen so that they can be used easily in the design of the installation and for its safety assessment. Modify existing paragraph 3.21: 3.21. The hazards for the site due to flooding shall be derived from based on suitable from the models.				
Argentina	2.7 and 3.21	2.7. The hazards associated with external events that are to be considered in the design of the nuclear installation and for its safety assessment shall be identified determined . For an external event (or a combination of events) the parameters and the values of those parameters that are used to characterize the hazards should be chosen so that they can be used easily in the design of the installation and for its safety assessment . Modify existing paragraph 3.21: 3.21. The hazards for the site due to flooding shall be derived based on suitable from the models.		X	Identified would be restricted to the nature. Determined includes the notion of level		
Japan WASSC 3	2.7	The hazards associated with external events that are to be considered in the design of the nuclear installation and for its safety assessment shall be determined for its safety assessment .	Clarification			X	The verb “consider” also applies for safety assessment
Japan WASSC 4	3.21	The hazards for the site due to flooding shall be derived based on suitable the model appropriately .	Clarification			X	
USA 3	3.21	Add “s” at the end of model	Editorial. The actual document does not match the table of changes, and the “s” needs to be added for it	X	Included in the master version of the file for the next		

			to read properly.		step in the process		
Lessons learned 12.1			New paragraph after 2.5. 2.5a From the characterization of the hazards resulting from the external events: – The frequency and severity information shall be used in establishing the design basis hazard level for the nuclear installation; – Account shall be taken of uncertainties in the design basis hazard level; and – The assessment level hazard to meet safety margins objectives shall be established for the installation.				New paragraph after 2.5. 2.5a From the characterization of the hazards resulting from the external events: – The frequency and <u>the</u> severity information shall be used in establishing the design basis hazard level for the nuclear installation; – Account shall be taken of uncertainties in the design basis hazard level; and – The assessment level hazard to meet safety margins objectives shall be established for the installation. <u>A hazard level, significantly higher than the design basis hazard level, shall be establish for the assessment of the safety margin of the installation against the required safety margin.</u>
Poland 1.	Addendum to NS-R-3 New paragraph after 2.5.	2.5a From the characterization of the hazards resulting from the external events: – The frequency and severity information shall be used in establishing the design basis hazard level for the nuclear installation; – Account shall be taken of uncertainties in the design basis hazard level; and – The assessment level hazard to meet safety margins objectives shall be established for the installation.	The wording "The assessment level hazard" is unclear. It should be defined / clarified somehow.		X		
Argentina	2.5a	2.5a From the characterization of the hazards resulting from the external events: – The frequency and the severity of the effects information shall be used in establishing the design basis hazard level for the nuclear installation; – Account shall be taken of uncertainties in the design basis hazard level; and – The assessment level hazard to meet safety margins objectives shall be established for the installation. Multi-unit sites should also be considered.		X X		X	Why at this stage of hazards characterization ?
France 6	2.5a	2.5a From the characterization of the hazards resulting from the external events:	Clarification Proposed bullet is unclear. The wording should be		X		

		<ul style="list-style-type: none"> – The frequency and severity information shall be used in establishing the design basis hazard level for the nuclear installation; – Account shall be taken of uncertainties in the for the determination of design basis hazard level; and <p>Potential for exceeding the design basis hazard level shall be investigated to determine whether additional safety margins shall be included in the design of the nuclear installation. The assessment level hazard to meet safety margins objectives shall be established for the installation.</p>	focused on consideration of beyond design basis event and adequate safety margin/avoidance of cliff edge close to the design basis				
Finland	2.5a		The sentence is not clear. What is meant with assessment level hazard? The term should be defined.	X			
Japan WASSC 1	2.5a	The assessment level hazard to meet safety margins objectives shall be established for the installation.	<p><u>Comment</u></p> <p>The wording “The assessment level hazard” and “safety margins objectives” should be added some explanation.</p>	X			
Japan	2.5a	<p>From the characterization of the hazards resulting from the external events:</p> <ul style="list-style-type: none"> • The <u>causality and likelihood</u> frequency and severity information shall be used in establishing the design basis hazard level for the nuclear installation; • Account shall be taken of uncertainties in the design basis hazard level; and • The assessment level hazard to meet safety margins objectives shall be established for the installation. 	<p>Clarification.</p> <p>For 5.21 in the SSR-2/1, adding “<u>Causality and likelihood</u> shall be considered in postulating potential concurrent events” is proposed.</p> <p>If the term “frequency” in the proposed sentence shown left is supposed to mean “likelihood” in 5.21 in the SSR-2/1, the same word should be used to keep a consistency between both requirements. If not, i.e. the proposed sentence requires “frequency” not “likelihood” in a clear manner, its reason concerning to different degree</p>		X	<p>Frequency is appropriate here and is different from likelihood</p> <p>Moreover this paragraph is not only for concurrent events</p>	

			<p>to be required should be clarified.</p> <p>Generally speaking, we cannot say that an uncertainty of frequency evaluation for external events is not always smaller than that for postulated events stated in 5.21. Therefore, if “likelihood” is acceptable in 5.21 as a requirement, it is not logical that “frequency” is required, i.e. “likelihood” is unacceptable for external events in the proposed text. Thus, a term should be selected very carefully to keep consistency with requirements in related other IAEA documents.</p> <p>If the term “severity” in the proposed sentence shown left is supposed to mean “causality” in 5.21 in the SSR-2/1, the same word should be used. If not, a difference between “severity” and “causality” should be clarified.</p>				
Japan	2.5a	<p>From the characterization of the hazards resulting from the external events:</p> <ul style="list-style-type: none"> The <u>causality and likelihood frequency and severity</u> information shall be used in establishing the design basis hazard level for the nuclear installation; Account shall be taken of uncertainties in the <u>design basis hazard</u> level; and The <u>assessment level hazard</u> to meet safety margins objectives shall be established for the installation. 	<p>Clarification for “design basis hazard” and “assessment level hazard”</p> <p>Both the IAEA safety glossary and NS-R-3 do not provide definitions of “design basis hazard” and “assessment level hazard.”</p> <p>Therefore, those definitions must be provided clearly. Otherwise, readers of the documents cannot understand difference between “design basis hazard” and “assessment level hazard.”</p>			X	See above
USA 2	2.5a and b	<p>Modify paragraph to read:</p> <p>2.5. Proposed sites for nuclear installations shall be evaluated</p>	<ul style="list-style-type: none"> Need to include risk (or hazard) consequence, as severity may not appropriately reflect 				

		<p>with regard to the frequency and severity of external natural and human induced events and their co-occurrences that could affect the safety of the installation.</p> <p>2.5a From the characterization of the hazards resulting from the external events:</p> <ul style="list-style-type: none"> • The frequency and severity information regarding hazards and risk consequence shall be used in establishing the design basis hazard level for the nuclear installation” • Account shall be taken of uncertainties in the design basis hazard level; and • The assessment level hazard to meet safety margins objectives shall be established for the installation. <p>2.5b Site specific design and safety assessment parameters shall be periodically evaluated based on lessons learned, updated information, updated technologies knowledge and methodologies, and their safety implications shall be evaluated.</p>	<p>magnitude of hazard or risk consequence.</p> <ul style="list-style-type: none"> • Lessons learned based on events or operational experiences are important in the periodic assessment of safety. • Updated technologies need to be included, as certain technologies used can be superseded. 	<p>X</p>	<p>X</p>	<p>But here we mean the relationship between the frequency and the severity</p>	
<p>ENISS</p>	<p>2.5a</p>	<p>From the characterization of the hazards resulting from the external events:</p> <ul style="list-style-type: none"> • The frequency and severity information shall be used in establishing the design basis hazard level for the nuclear installation; • Account shall be taken of uncertainties in the design basis hazard level; and • The assessment level hazard to meet safety margins 	<p>The third bullet is not clear and should be deleted.</p>	<p>X</p>	<p>X</p>	<p>2.5 b addressed above in this table</p>	

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 Comment resolution table draft 1, 7 June 2013

		objectives shall be established for the installation.					
WNA	2.5a	The An <u>assessment of the hazard levels</u> hazard <u>to meet safety margins</u> objectives shall be established for the installation.	The New paragraph after 2.5, third bullet is hard to understand and awkward. It is suggest to reword as indicated.		X		