COMMENTS BY REVIEWER							RESOLUTION			
Country	**Organization**	**Comment No.**	**Para No.**	**Line No.**	**Proposed new text**	**Reason**	**Accepted**	**Accepted, but modified as follows**	**Rejected**	**Reason for modification/rejection**
Pakistan	PNRA	9	1.1	5	**Removal of Text** ~~Achievement of~~ the highest level of safety that can reasonably be achieved in relation to 6 nuclear installations requires an effective governmental, legal and regulatory framework.	To make the sentence meaningful and to avoid duplication in sentence (regarding achievement and achieved)		1.1 Achieving a high level of protection and safety in relation to nuclear installations		Agree with removing duplicative word. Made slight modification to proposed text.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	4	1,2	13	This Safety Guide provides recommendations on meeting the requirements relating to authorization by the regulatory body ~~(in particular, Requirements 23 and 24)~~ established in IAEA Safety Standards Series No. GSR Part 1 (Rev. 1), Governmental, Legal and Regulatory Framework for Safety [1] (in particular, Requirements 23 and 24).	Editorial	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	6,1	1.3	17	Figure 1 shows the main stages dealt with in this Safety Guide regarding the licensing process. These stages include the six major stages of the lifetime of a nuclear installation *as defined in the IAEA Nuclear Safety and Security Glossary [2].* Past experience has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed. Moreover, in a given stage, there may be one or more 'hold points' or required licensing actions, set by national legislation and/or regulatory requirements, such as first concrete, installation of major safety significant equipment, entering commissioning, first criticality etc.	1) Definition from the Glossary is the following: "The terms **siting**, design, construction, commissioning, operation and decommissioning are normally used to delineate the six major stages of the lifetime of an authorized facility and of the associated licensing process". According to this, please change in Figure 1 "siting and site evaluation" to "siting", as siting is a step; site evaluation is a process.		changed 'indicate' in the figure heading to 'provide examples' "site evaluation" removed from figure		agree with edits with minor change.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	3	1.3	19	Past experience has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed. **Yet a stage-by-stage performance of works is preferable because transition from one stage to the next one is normally related with mandatory licensing procedures including safety assessments.** Moreover, in a given stage, there may be one or more 'hold points' or required licensing actions, set by national legislation and/or regulatory requirements~~, such as first concrete, installation of major safety significant equipment, entering commissioning, etc.~~	Adjacent stages may be overlapped only if this is not contradictory to national legislation. The detailing is not obvious nor universal. Therefore, it is better to delete it.		Past experience from some States has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed, as allowed by national legislation and/or regulatory requirements. Moreover, in a given stage, there may be one or more 'hold points' or required licensing actions, set by national legislation and/or regulatory requirements.		Proposed addition was not accepted; however, text was added to indicate, "as allowed by national legislation and/or regulatory requirements." Deletion of examples was accepted.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	6,2	1.3	23	Figure 1 shows the main stages dealt with in this Safety Guide regarding the licensing process. These stages include the six major stages of the lifetime of a nuclear installation *as defined in the IAEA Nuclear Safety and Security Glossary [2].* Past experience has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed. Moreover, in a given stage, there may be one or more 'hold points' or required licensing actions, set by national legislation and/or regulatory requirements, such as first concrete, installation of major safety significant equipment, entering commissioning, first criticality etc.	2) Additionally, a second gray arrow indicating a possible hold point could be added for the box "Decommissioning". Decommissioning licensing in Germany includes typically two (or more) licensing steps (1st: General framework and processes, 2nd: Dismantling of relevant components such as the reactor pressure vessel and bioshield). These steps define separate hold points. Also refer to para 3.76.			X	Grey arrows are included only as examples to imply that various holdpoints could be included.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	6,3	1.3	23	Figure 1 shows the main stages dealt with in this Safety Guide regarding the licensing process. These stages include the six major stages of the lifetime of a nuclear installation *as defined in the IAEA Nuclear Safety and Security Glossary [2].* Past experience has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed. Moreover, in a given stage, there may be one or more 'hold points' or required licensing actions, set by national legislation and/or regulatory requirements, such as first concrete, installation of major safety significant equipment, entering commissioning, first criticality etc.	3) "first criticality" is another relevant and essential example for a major hold point. We suggest to add.			X	examples of hold points were deleted based on another MS comment.
India		1	1.3	23	Such as first ***pour of*** concrete, installation of major safety significant equipment, entering commissioning, etc.	'First concrete' term is incomplete revising the term as 'first pour of concrete' may be considered to give the intended meaning.			X	examples of hold points were deleted based on another MS comment.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	5	1.2 Footnote 1	25	~~Authorization to operate a facility or to conduct an activity may be granted by the regulatory body or by another governmental body to an operator (an operating organization or a person). 'Authorization' takes the form of a written granted permission which could include, for example, licensing, certification or registration~~ Authorization is the granting by a regulatory body or other governmental body of permission for a person or organization (the operator) to conduct specified activities. Authorization could include, for example, licensing (issuing a licence), certification (issuing a certificate) or registration.	Direct quotation of formulation from IAEA Safety Guide is better solution here. Additionally, we suggest to delete "written", as it should be considered that permissions, licences etc. could also be granted digitally.		"Authorization is defined as the granting by a regulatory body or other governmental body of written permission for a person or organization (the operator) to conduct specified activities. Authorization could include, for example, licensing (issuing a licence), certification (issuing a certificate) or registration."		Footnote modified to copy language used in the IAEA Glossary verbatim. The word "written" was retained to match the Glossary. Additionally, digitally granted authorizations would also have a record and can be considered as "written" for it may be printed anytime.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	7,1	1.6	43	This Safety Guide provides recommendations on how the licensing process should be applied at the various stages of the lifetime of a nuclear installation[3] (siting ~~and site evaluation~~, design, construction, commissioning, operation and decommissioning) until release from regulatory control, both for stationary and transportable installations. A nuclear installation is defined as "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 disposal facilities for radioactive waste"[2]. Interactions between the regulatory body and the applicant or licensee (including during pre-licensing) are also discussed. Recommendations on the application by a regulatory body of a graded approach to the licensing process are also provided in this Safety Guide.	1) site evaluation is a process, stretched over a number of stages of the lifetime of a facility, not a stage itself.	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	7,2	1.6	43	This Safety Guide provides recommendations on how the licensing process should be applied at the various stages of the lifetime of a nuclear installation[3] (siting ~~and site evaluation~~, design, construction, commissioning, operation and decommissioning) until release from regulatory control, both for stationary and transportable installations. A nuclear installation is defined as "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 disposal facilities for radioactive waste"[2]. Interactions between the regulatory body and the applicant or licensee (including during pre-licensing) are also discussed. Recommendations on the application by a regulatory body of a graded approach to the licensing process are also provided in this Safety Guide.	2) The scope should clearly mention if transportable units are included or not.			X	The text notes neither stationary nor transportable. It was felt that most of the recommendations would be applicable to transportable installations, but it was decided not to specifically call them out in this version of the document.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	7,3	1.6	43	This Safety Guide provides recommendations on how the licensing process should be applied at the various stages of the lifetime of a nuclear installation[3] (siting ~~and site evaluation~~, design, construction, commissioning, operation and decommissioning) until release from regulatory control, both for stationary and transportable installations. A nuclear installation is defined as "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 disposal facilities for radioactive waste"[2]. Interactions between the regulatory body and the applicant or licensee (including during pre-licensing) are also discussed. Recommendations on the application by a regulatory body of a graded approach to the licensing process are also provided in this Safety Guide.	3) Moving the definition to the main body of the text from the footnote and giving additional information in the footnote is making the scope clear and easy to understand.			X	Bringing definition from footnote to text introduces complexity to the text. This text is not about defining the nuclear installation or listing whole list of nuclear facility types. Footnote reference moved to 1.1.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	8	1.6 Footnote 3	59	~~A nuclear installation is defined as "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 disposal facilities for radioactive waste." [2]~~ This definition thus includes: nuclear power plants; research reactors (including subcritical and critical assemblies) and any adjoining radioisotope production facilities; storage facilities for spent fuel; 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. Similar recommendations on the licensing process for disposal facilities for radioactive waste are provided in other IAEA Safety Standards (SSR-5, Disposal of Radioactive Waste [2011], and SSG-23, The Safety Case and Safety Assessment for the Disposal of Radioactive Waste [2012])	This clarification is for additional information provided in the footnote and for clear distinction as to what the scope of the document is.			X	This long list of nuclear facilities may have no added value on the text, introducing too detailed information. A reference to the IAEA Glossary is sufficient.

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Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	9	2.1	74	A licence is a legal document issued by the regulatory body granting authorization to perform specified activities relating to a facility or activity [2]. It is a product of the authorization process (the term licensing process is sometimes used), usually covering a particular stage of the lifetime of a nuclear installation. ~~The regulatory body, whose status may vary from one State to another, is one or more authorities designated by the government of a State as having legal authority for conducting the regulatory process, including issuing authorizations [2].~~	If possible, all characteristics to define "licence" should be stated in one paragraph and a separate paragraph should be added for the definition of "regulatory body"		2.1 The regulatory body, whose status may vary from one State to another, is defined as an authority or system of authorities designated by the government of a State as having legal authority for conducting the regulatory process, including issuing authorizations [2]. 2.2 A licence is a legal document issued by the regulatory body granting authorization to perform specified activities relating to a facility or activity [2]. A licence is a product of the authorization process, usually covering a particular stage of the lifetime of a nuclear installation. The term 'licensing process' is often used for nuclear installations; it includes all licensing and authorization processes for a nuclear installation and its activities. Licensing may take different forms, such as granting of a permit, agreement, consent, regulatory approval or granting of another similar regulatory instrument, depending on the governmental and regulatory framework of the particular State.		Text re-ordered to have one paragraph on regulatory body and one on licence.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	10	2.1A New para	79	The regulatory body, whose status may vary from one State to another, is one or more authorities designated by the government of a State as having legal authority for conducting the regulatory process, including ~~issuing~~ granting authorizations [2].	A separate paragraph for the definition of "regulatory body" would be preferred. Please change to "granting authorizations", to have a consistent term throughout this Safety Guide.		Agreed but implemented as the first paragraph		as shown in Germany comment #9, regulatory body is now under 2.1 and licence is under 2.2.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	11	2.2	79	~~A licence is a product of the authorization process, usually covering a particular stage of the lifetime of a nuclear installation.~~ The term 'licensing process' is often used for nuclear installations; it includes all licensing and authorization processes for a nuclear installation and its activities. Licensing may take different forms, such as certification, granting of a permit, agreement, consent, regulatory approval or granting of another similar regulatory instrument, depending on the governmental and regulatory framework of the particular State.	The first sentence is redundant, this explanation has been used several times before.			X	While references to the issuance of a licence are used in Section 1, it is essential to provide more detail in this Section.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	4	2.2	82	Licensing may take different forms, such as **~~certification~~**, granting of a permit, agreement, consent, regulatory approval or granting of another similar regulatory instrument, depending on the governmental and regulatory framework of the particular State	Licensing and certification are different form of authorization. IAEA Glossary 2022 «A licence is a product of the **authorization** process… Authorization may take other forms, such as registration or **certification**». DS539 page 2 foot-note: «'**Authorization**' takes the form of a written permission which could include, for example, licensing, **certification** or registration»	X			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	43	Section "Definitions…"	96	*To add a para 2.5* to define Licence Conditions, e.g.:* **2.5* Licence conditions is an integral part of a licence that comprises the conditions necessary for ensuring safety of an installation or an activity at that installation, to be complied with by the licensee.** *and/or to move here the definition of Licence Conditions from para 2.16*	Licence Conditions is a very important term that deserves to be defined explicitly in the Section "Definitions…"		2.3 Licence conditions are additional specific obligations with the force of law that may be incorporated into the licence for a nuclear installation, to supplement general regulatory requirements or to make them more precise, if necessary. Licences should state explicitly, or should include by reference or attachment, all licence conditions imposed by the regulatory body.		2.16 moved to the Definitions section, with some slight modifications, and is now 2.3.
Canada	Canadian Nuclear Safety Commission	1	Para 2.6	104	"The licensing process should be documented and understood by all the parties concerned and should be predictable (i.e. well defined, clear, transparent and traceable). …"	To prevent regulators from changing the licensing processes without updating relevant documentation leaving applicants to scramble to meet new requirements that are not documented nor fully understood.		2.7 The licensing process should be understood by all the parties concerned and should be well defined, documented, clear, transparent and traceable.		agree with the intent of the comment

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Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	12	2.6	104	The licensing process should be established in a ~~systemic~~ systematic way to facilitate efficient progression of regulatory activities	Suggestion to use “systematic” instead of “systemic”	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	13	2.7	112	… This approach may be especially applicable for first-of-a-kind designs and designs with innovative technology that are still in various stages of development (see also para. 2.~~28~~29).	Please check the reference	X			
India		2	2.7	118	Any such processes should ensure that the most important safety issues (including their interactions with security and safeguards) are dealt with properly in the pre-licensing phase. Pre-licensing does not replace the licensing process and does not provide a certification. ***However, outcome of interactions are to be documented, which may be referred during subsequent licensing process.***	To help minimize duplication of effort in demonstrating safety case as well as in regulatory review.		"However, the outcomes of any pre-licensing engagement should be documented and referred to during subsequent licensing processes, as applicable."		agree with the intent of the comment but slightly modified .
USA	USNRC	1	2.7	121	Replace "certification" with "authorization"	Completeness. Per footnote 1 on Page 1 "Authorization" is a collective term that includes certification and other types of activities.	X			
Canada	Canadian Nuclear Safety Commission	2	Para 2.8 (a)	127	“(a) For a specific time period (e.g. 10 years, 40 years), or for a specific stage in the lifetime of the nuclear installation (e.g. construction, operation). In such a case, a mechanism should be established to ensure that the person or organization responsible for the nuclear installation and its activities remains responsible for safety, security, ~~and~~ safeguards and the environment at the installation, even if the licence has expired, unless the site has been removed from regulatory control;”	In Canada, the environment is an additional key regulatory item.			X	For most member states, while the environment is part of the licensing process, it is considered under the safety, not as an equivalent of 3S. Addirionally, environment can be under the responsibility of another regulator in many member states.
Mexico	CNSNS	1	2.10	139	**2.10 The legal framework of the State should ensure that nuclear related activities are only conducted with proper authorization.** ~~2.10~~ **2.11** The legal framework of the State is required to set out the responsibilities for issuing a licence or other type of authorization and, in particular, determine who is empowered to issue licences or other authorizations (see Requirements 2 and 3 of GSR Part 1 (Rev. 1) [1]). Depending on the system used in the particular State, different authorizations may be issued by different authorities.	It is advisable to add a provision, prior to the paragraph in question, that explicitly states that any activity related to the operation of nuclear facilities or the management of radioactive waste shoud be made with proper authorization, as required by the Convention on Nuclear Safety and the Joint Convention.		2.11 The legal framework of the State should ensure that nuclear related activities are only conducted after proper authorization by the regulatory body. The legal framework should also set out the responsibilities for issuing a licence or other type of authorization. Depending on the system used in the particular State, different authorizations may be issued by different authorities.		agree with comment and added to the beginning of 2.11
Slovak Republic	JAVYS, a.s.	2	2.10	139	The document itself, in para 2.10, mentions the possibility of needing more licenses for facilities or activities from different state authorities. From a substantive point of view, the text in paragraphs 3.8 and 3.9 dealing with the relationship between safety assessment and environmental impact assessment can be considered an illustration of the problem. We are of the opinion that the problem of the existence of multiple regulatory authorities – authorization/license providers is not so much a substantive one as a legally formal one. The regulatory frameworks usually do not require cooperation, or, at least, effective communication between such authorities, so the relevant authorization processes often take place independently. However, they are often based on the same information. Individual processes may lose their clarity and transparency. Therefore, it could be useful to supplement paragraph 2.10 with text dealing with the need for consistency of individual authorization/license documents and processes, or their hierarchisation, respectively.	This comment is not fundamental in nature; it is aimed only at improving the text.			X	Proposal rejected due to variations in Member States' approaches. The existing text acknowledgest the potential differences between Member States.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	14	2.15	164	Procedures for evaluating, approving, denying, ~~and~~ issuing, and withdrawal authorizations for each stage ….	Please add “withdrawal” so that there are clear conditions for regulator and licensee in cases where prescriptions in the licence (licence conditions) are not complied with.			X	Rejected as the goal is stated as 'to ensure that all necessary steps have been taken prior to the granting of a licence' > license withdrawal would not be a step prior to granting a license, and would be more fitting in a guide on oversight and enforecment.

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USA	USNRC	2	2.16	168	Licence conditions should be incorporated into the licence for a nuclear installation, to supplement ~~general~~ regulatory requirements ~~or to make them more precise, if necessary~~.	Replace “general requirements” with “regulatory requirements” for clarity. Recommend deleting the last portion of the sentence, since this could be taken to mean modifying a regulatory requirement in a manner that could create a conflict or gap in the requirement.		..., to supplement general regulatory requirements...'		In some countries, license conditions may be considered regulatory requirements as well. Hence, The 'general' should stay in place to make sure this sentence reflect the specific v.s. non-specific aspect. The proposed deletion was not accepted, as licence conditions could provide more precise requirements. paragraph moved to 2.3.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	15	2.17	173	Licence conditions should cover, as appropriate, safety related aspects affecting the siting ~~and site evaluation~~, design, construction, commissioning, operation and decommissioning of the nuclear installation and its subsequent release from regulatory control, so as to enable effective regulatory control at all stages.	Please delete. Site evaluation is not a stage in the lifetime of a nuclear installation, but a process.	X			
India		3	2.17	176	These conditions should cover important aspects, including but not limited to, design, radiation protection, maintenance programmes, emergency planning and procedures, modifications, the management system, operational limits and conditions, operating procedures, radioactive waste management, arrangements for decommissioning, ***arrangements for safe on-site storage and/or transport of radioactive material,*** nuclear security, cybersecurity, safeguards provisions, nuclear liability (insurance), safety analysis, periodic safety review, human and financial resources, fuel management, outages, aging management, safety culture, resources, and authorization of personnel.	For completeness and not overlooking an important safety and security aspects in licensing process.			X	As in some states this would result in overlap with the waste management and/or the transportation is not part of the nuclear installation license, this comment was rejected. The list is specifically mentioned not to be limited.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	7	2.17	180	Exclude “nuclear security, cybersecurity”	The matters of nuclear security and cybersecurity are out of scope of this document.			X	Security is considered under licensing, and there was a desire to provide more guidance on security aspects.
Sweden	Swedish Radiation Safety Authority	1	2.17	180	decommissioning, nuclear security~~,~~ (including e.g. physical protection, information security, ~~cybersecurity~~ computer security as well as prevention and protection against insider threats), safeguards provisions, nuclear liability	For readers not explicitly engaged in nuclear security matters, it may be helpful to exemplify, at least once in this publication, what types of measures are typically associated with this subject matter. This paragraph is the first instance where nuclear security (as a subject matter) is mentioned. Specifically regarding cyber security, according to the IAEA Nuclear Safety and Security Glossary this term (and IT security) is synonymous with computer security. However, computer security is the preferred term in IAEA publications.		... nuclear security, safeguards provisions,		Nuclear security covers these aspects. Adding examples of nuclear security would make this listing less readable.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	16	2.17	184	… License conditions could also include exemptions of nuclear regulations and/ or additional non-nuclear regulations	“Additional” could be incorporated to add that license conditions could also include non-nuclear regulations. “And/ or” provides that both cases could be applicable.		"In some States, license conditions could also include exemptions."		Proposed text is modified as exemptions from regulations are not allowed in some member states.
Japan	NRA	1	2.19	200	On a particular site, there may be different nuclear installations at different stages of their lifetimes with different licensees and with authorizations or licences having different licensing bases, depending on the type of regulatory control established in the State. In cases where several licensees share common safety related ~~features~~ items, arrangements should be made to ensure that ~~overall safety is not compromised,~~ the specific responsibilities of all licensees ~~should be~~ are identified so that overall safety is not compromised.	(1)Use the term “safety related items” defined in the Glossary to avoid unnecessary confusion (“safety related features” are not defined in the Glossary.). (2)Modify second sentence to show explicitly who will be responsible.		"In cases where several licensees share common items important to safety related features, arrangements should be made to ensure that overall safety is not compromised, the specific responsibilities of all licensees are should be identified so that overall safety is not compromised."		agree with comment and slightly modified to follow language from Glossary
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	9	2.20	206	2.20. The document **package** submitted to the regulatory body as part of the license application ~~within the framework of the licensing process~~ **should be updated as of the date of the application submission**. ~~, as appropriate, during the lifetime of the nuclear installation~~ **In course of performance of the licensed activity, the licensee should keep that document package up to date according to the actual state of the nuclear installation.**	A standard requirement of some national regulations is to keep the in-depth safety analysis report up to date at any time			X	the suggested change is a national example of 'updated, as appropriate, during the lifetime'. The original text is better to encompass the situation in all member states.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	17	2.20	212	… ~~For nuclear power plants, primarily, t~~ The safety analysis report is an important document for the entire licensing process; recommendations on the format and content of safety analysis reports are provided in IAEA Safety Standards Series No. SSG-61,"Format and Content of the Safety Analysis Report for Nuclear Power Plants [4].	Safety analysis report is relevant to all nuclear installations not only NPPs. Compare also Para 2.18 of SSG-12.		"The safety analysis report is an important document for the entire licensing process. The scope of the safety analysis is pointed out in requirement 14 in IAEA General Safety Requirements No. GSR Part 4 (Rev. 1) [25]. Further guidance for nuclear power plants and research reactors can be found in IAEA Safety Standards Series No. SSG-61, Format and Content of the Safety Analysis Report for Nuclear Power Plants [4] and in IAEA Safety Standards Series No. SSG-20 (Rev. 1), Safety Assessment for Research Reactors and Preparation of the Safety Analysis Report [X], respectively."		Agree with intent of comment. Revised text represents feedback from multiple MS. A reference to GSR Part 4 was added, and additional guidance for research reactors was included with SSG-20.
Sweden	Swedish Radiation Safety Authority	2	2.20	212	"For nuclear facilities, the safety analysis report is an important document for the entire licensing process. The scope of the safety analysis is pointed out in requirement 14 in IAEA General Safety Requirements No. GSR Part 4 (Rev. 1) [25]. Recommendations on the format and content of safety analysis reports for nuclear power plants are provided in IAEA Safety Standards Series No. SSG-61, Format and Content of the Safety Analysis Report for Nuclear Power Plants [4]. Selected postulated initiating events for nuclear fuel cycle facilities are provided in IAEA Specific Safety Requirements Series No. SSR-4, Safety of Nuclear Fuel Cycle Facilities [22]."	Safety analysis is needed, at some level, for all nuclear facilities, see GSR Part 4. Moreover, an adequate safety analysis report is required for Nuclear Fuel Cycle Facilities (see requirement 1, para 3.5 SSR-4).		"The safety analysis report is an important document for the entire licensing process. The scope of the safety analysis is pointed out in requirement 14 in IAEA General Safety Requirements No. GSR Part 4 (Rev. 1) [25]. Further guidance for nuclear power plants and research reactors can be found in IAEA Safety Standards Series No. SSG-61, Format and Content of the Safety Analysis Report for Nuclear Power Plants [4] and in IAEA Safety Standards Series No. SSG-20 (Rev. 1), Safety Assessment for Research Reactors and Preparation of the Safety Analysis Report [X], respectively."		Agree with intent of comment. Revised text represents feedback from multiple MS. A reference to GSR Part 4 was added, and additional guidance for research reactors was included with SSG-20.
Canada	Canadian Nuclear Safety Commission	3	2.21 (a)	222	"(a) A facility and/or activity should be authorized only when the regulatory body has confirmed that the facility or activity is going to be used or conducted in a manner that does not pose an undue risk to workers, the public or the environment. This should include confirmation that the applicant has the organizational capability, organizational structures, adequacy of resources, competence of managers and staff, and appropriateness of management arrangements to fulfil its safety obligations as the operating organization of the nuclear installation, and should also include adequate financial guarantees to decommission licensed activities. This applies to a new licence, licence renewal, and the transfer of a licence."	Recommended additional guideline.		, and if applicable, financial arrangements for decommissioning licensed activities		agree with comments with slight modifications
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	6	2.21 (a)	222	In listing (a), add 'NPP design' after 'adequacy'.				X	2.21 is related to organizational capabilities for licensing of all nuclear installations and not related to NPP design adequacy. This comment was intended for a different document.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	10	2.21 (c)	229	(c) The regulations presenting the licensing and approval processes should explicitly describe the **procedures** ~~regime~~ to be followed **both** by the applicant **and by the licensing body** ~~in its descriptions and justifications of the safety case in each design area of the licensing process.~~ **conditions and terms of commencement and completion of licensing procedures, rights and obligations of the parties, as well as to set specific mandatory requirements to the scope of document packages submitted as part of the license application.**	A standard requirement of some national regulations. Term "regime" is not clear in this context.		(c)The regulations presenting the licensing and approval processes should explicitly describe the regulatory approach to be followed (e.g. prescriptive, performance-based) (see GSG-13, Functions and Processes of the Regulatory Body for Safety [9]).		modified to address intent of comment and add reference to GSG-13
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	18	2.21(c)	231	(c) The regulations presenting the licensing and approval processes should explicitly describe the regime to be followed by the applicant in its descriptions and justifications of the safety case in each *design area* of the licensing process.	What is "design area"? Is it actually needed here?	X			modified to address intent of comment and add reference to GSG-13
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	32	2.21	243	Exclude "nuclear security requirements" and change the text to following: "Emergency preparedness requirements should be predefined and…"	The matters of nuclear security are out of scope of this document.			X	Security is in scope of the licensing proces, although it might be in a different set of documents. Hence, it is to be included in this guide.

COMMENTS BY REVIEWER							RESOLUTION			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	11	2.21 (k)	256	(k) The regulatory body **may** ~~should~~ include **additional installation specific** conditions in the licence, as appropriate.	This licensing principle should be more specific with regard to the "conditions" to be imposed by RB.		(k) The regulatory body **may** ~~should~~ include license conditions, as appropriate.		changed to "may" to allow flexibility. However, not all licence conditions in all member state are installation-specific. In some countries, general licence conditions are used to supplement general regulatory requirements.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	12	2.21 (s)	287	(s) The means of challenging or appealing against a licence or part of a licence should be made clear by the regulatory body or within the regulatory framework **The means of challenging a refusal of licence issuing should be explicitly set in licensing regulations based on existing national laws**	Should be added also a principle regarding refusal challenging *add to 229??*		(s) The means of challenging or appealing a licensing decision should be made clear by the regulatory body or within the regulatory framework.		Reworded to licensing decision, which could then include a refusal, so this captures the intent of the comment.
Japan	NRA	2	2.23	295	The regulatory framework should establish requirements or conditions (depending on factors such as the nature of the changes, the safety significance and the magnitude of the risks involved) that may require prior review, assessment and approval by the regulatory body of changes or modifications to the site (including a transfer of a licence to another organization), the nuclear installation, the organizational structure of the licensee, procedures, processes or plans for future activities (e.g. decommissioning), at any stage of the life of the nuclear installation. ~~At any stage of the nuclear installation's lifetime, changes or modifications to the site (including a licence transfer to another organization), the nuclear installation, the organizational structure of the licensee, procedures, processes or plans for future activities (e.g. decommissioning) may require (depending on factors such as the nature of the changes and the magnitude of the risks involved) prior review, assessment and approval by the regulatory body and revision of the licence or certain licence conditions.~~ Changes or modifications to a nuclear installation may include the replacement of major components or subsystems and, in some cases, wholesale replacement of the facility with a new or refurbished one.	Duplication. The second sentence is similar to that of the first sentence.		2.23 Changes or modifications to the site, nuclear installation, organizational structure, procedures, processes and plans for future activities (e.g. decommissioning) of the licensee may be needed at any stage of the nuclear installation's lifetime. The regulatory body should establish when review, assessment and/or approval and revision of the licence or certain licence conditions is needed (depending on factors such as the nature of the changes and the magnitude of the risks involved). Examples of where changes or modifications to a nuclear installation may require regulatory review include licence transfer, the replacement of major components or subsystems and, in some cases, wholesale replacement of the facility.		Text adjusted to address comment
Sweden	Swedish Radiation Safety Authority	3	2.23	301	Remove the second sentence in para. 2.23.	The first two sentences are more or less copies of each other, but the first sentence also talks about regulatory requirements.		2.23 Changes or modifications to the site, nuclear installation, organizational structure, procedures, processes and plans for future activities (e.g. decommissioning) of the licensee may be needed at any stage of the nuclear installation's lifetime. The regulatory body should establish when review, assessment and/or approval and revision of the licence or certain licence conditions is needed (depending on factors such as the nature of the changes and the magnitude of the risks involved). Examples of where changes or modifications to a nuclear installation may require regulatory review include licence transfer, the replacement of major components or subsystems and, in some cases, wholesale replacement of the facility.		Text adjusted to address comment
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	13	2.25	322	Paragraph 2.25 is proposed to read as follows: «The regulatory framework should empower the regulatory body to make regulatory decisions and to grant, amend, suspend, transfer, terminate, or revoke licences, conditions or authorizations, as appropriate»	GSR Part 6, Requirement 5 The regulatory body shall regulate all aspects of decommissioning throughout all stages of the facility's lifetime … to the completion of decommissioning actions and the termination of authorization for decommissioning.				language already includes "revoke" which would cover termination.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	19	2.27	331	The procedures or guidelines for applying for a ~~new~~ initial licence should be published by the regulatory body, together with the information on how and where to submit the application, e.g. an address to which the written application should be sent.	1) Does this refer to new licence of initial licence? Please verify. 2) Our suggestion takes into account the possibility that an application might be submitted electronically.			X	the document uses the term new licence, as initial licence implies that it will be revised or supplemented, which isn't necessarily the case. The text was subsequently modified to remove the reference to where to submit the application. Revised text: 2.27 The procedures or guidelines for applying for a new licence should be published by the regulatory body. It should be made clear what the application should include, for example:

COMMENTS BY REVIEWER							RESOLUTION			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	14	2.27	331	***«h) – the document granting the right to install the NF in the territory; i) – the applicant has sources of financing of the works on elimination of accidents and decommissioning of nuclear facilities"; j)… – and other documents according to the published procedure."***	The documents for submission of the application for obtaining of a new license have been provided not in sufficient scope. It is proposed to add the information. Hereinafter: our proposals are printed in highlighted italics; the original text of draft document DS539 is printed in italics			X	These first two examples are too specific for a specific country to be included in IAEA guidance. The third one is supposed to make the list complete, however this is not required as it is a non exhaustive list.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	20	2.27	335	(b) The description of the site for which the application is being made;	Clarification		"A high-level description of the site for which the application is being made"		agree with the comment
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	21	2.28	345	If not included in procedures or guidelines for applying ~~Before an applicant submits an application~~, the regulatory body may ~~should~~ implement a preparatory phase, before an applicant submits an application. D~~d~~uring ~~which~~ this phase basic licensing requirements ~~are~~ could be set out and the process to be followed ~~is~~ could be made clear to the applicant.	We suggest the formulation as an offer of the option for the regulator to implement an optional preparatory phase.		2.27 The regulatory body should implement a preparatory phase before an applicant submits an application. During this phase, basic licensing requirements could should be set outdefined and the process to be followed could should be made clear to the applicant.		Some minor editing - Doing some work with an applicant applies for a licence is a best practice that should be done whether or not it is already included in their preocess.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	15	2.28	345	*"The regulator ~~shall~~* ***can*** *conduct the preparatory phase before submission of an application by the applicant."*	Clarification of the procedure shall be performed at the discretion of the regulatory authority, as this document is advisory, so the word "shall" is inappropriate			X	The existing text was "should" which is being retained.
Sweden	Swedish Radiation Safety Authority	4	2.28	352	"...to build a nuclear installation. Nevertheless,…"	It is inappropriate to encourage an applicant to start a licensing process with searching for exemptions from rules, nuclear related or not. The new sentence that starts on line 352 should therefore be removed.			X	It doesn't say to look for an exemption. It says that there may be possible exemptions that may be managed with reguators. Exemptions on nuclear rules should be mentioned because some non-nuclear rules may have a strong impact on the design, and in some cases be contradictory with nuclear safety. It would be a good practice to recgnize any potential exemptions early, and ensure they are managed as early as possible in the licensing process.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	22	2.28A New issue	356	The regulatory body should strongly encourage the applicant during the preparatory or pre-licensing phase to develop and implement programmes to help strengthen the safety culture throughout the different stages of a nuclear installation including pre-operational phases of a project, from project conception to initial fuel loading.	We suggest to add this additional statement, i.e. the suggestion to include the implementation of safety culture programmes starting in the preparatory phase.			X	Safety culture is an important theme. However, in the current section it would be misplaced as this describes the preparatory phase in only the most general terms.
Japan	NRA	3	2.29	356	Pre-licensing interactions (see para. 2.7) of the regulatory body with the vendor and the potential licensee are encouraged. These pre-licensing interactions not only benefit the regulatory body, but they also benefit vendors and potential licensees because they allow for early identification and understanding of technical and policy issues that could affect licensing. This is particularly important for first-of-a-kind installations, and for matters relating to radioactive waste management and decommissioning, as these are aspects that are particularly important to be considered at the earliest stages of the development of the design. Design features and an assessment of safety, security, and safeguards needs, may be addressed in pre-licensing interactions, including the interfaces between each of these areas. At an early pre-licensing stage, the vendor and the potential licensee may not have yet developed the arrangements and requirements that would be needed to be demonstrated during the licensing processes. Any dialogue and identified issues in pre-licensing interactions between regulatory body and the vendors and the potential licensee should be made public in order to keep transparency of regulatory activities.	Any contents discussed in interactions between regulatory body and the vendor and the potential licensee in pre-licensing process should be made public in order to keep transparency of regulatory activities, as well as to show that there is no secret agreement behind closed doors.		"Regulatory bodies should publicly acknowledge that pre-licensing interactions with the vendor and potential licensee are taking place."		There can be a lot of learning that a potential applicant needs to do before submitting a licence. Pre-licensing is a time to ask questions without the fear of having those discussions made public. While the fact that discussions are taking place should be made public, disclosing details of those discussions can have a negative impact on a potential applicant, and they may not ask questions to help them make an application better.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	23	2.29	364	… At an early pre-licensing stage, the vendor and the potential licensee may not have yet developed the arrangements and ~~requirements~~ features that would be needed to be demonstrated during the licensing processes.	Are vendor and potential licensee the ones, who develop requirements? Please verify.		Early in the pre-licensing stage, the vendor and the potential licensee might not have yet developed everything that would be needed during the licensing processes.		agree that requirements may not be the proper word. Comment incorporated with minor changes.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	24	2.30	368	The regulatory body should develop regulations and requirements for the licensing process …	Clarification			X	bullet changed, so proposed edit is no longer applicable. Bullet now reads: 2.26 The regulatory body should ensure that regulations address the licensing process for nuclear installations and should provide procedures or guidelines for applicants in order to provide clarity and transparency in the licensing process.
Mexico	CNSNS	2	2.30	368	~~2.30~~ **2.25** The regulatory body should develop regulations for the licensing process of nuclear installations and should provide guidelines for applicants in order to provide clarity and transparency in the licensing process.	The foundation for any licensing activity is the prior establishment of a regulatory framework. Therefore, before outlining the powers or duties of the regulatory body derived from it, it is advisable to first state that such a framework must have been developed and enacted in accordance with the established procedure.		moved to 2.27		2.30 shifted to 2.27 and modified, as it should come after 2.26, which describes the content of the section
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	25	2.31(c)	377	The regulatory framework should empower the regulatory body to conduct reviews, assessments and inspections of: …. (c) The licensee's compliance with regulations, safety objectives, principles, requirements and criteria, as well as the safety cases and safety analyses, and the conditions of the licence;	Clarification			X	this bullet was deleted as it was repetitive to (a).
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	25	2.31(d)	379	The regulatory framework should empower the regulatory body to conduct reviews, assessments and inspections of: …. (d) The continued organizational capability of the licensee (and of its contractors and subcontractors) to meet the actual ~~authorization~~, licence or regulatory requirements.	Clarification		(c) The continued organizational capability of the licensee (and of its contractors and subcontractors) to meet the conditions of the licence and regulatory requirements.		accepted with minor changes and now bullet (c).
Slovak Republic	JAVYS, a.s.	3	2,33	390	Para 2.33 indicates how licensing activities should be managed by the regulatory authority. In many cases, however, the regulatory body is not able to substantively assess all safety documentation and therefore cannot do without external (independent) technical support. It is logical that the approaches to the need for outsourcing on both sides of the licensing process is discussed in more detail in Appendix II. We believe that this aspect of licensing processes could be given more space in text of the guide itself.	This comment is not fundamental in nature; it is aimed only at improving the text.		", including any external resources that are needed."		added language to note that external resources may be needed for the regulatory body
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	16	2.35	405	***«i) based on the results of the identified non-conformities during inspections of the regulatory authority;*** ***j) provision of unreliable information by the licensee to the NF safety regulatory authority"***	It is required to complete the list of the aspects that require reassessment of safety of the NF and its operations		(i) identification of non-compliance with the licensing basis.		added text to address proposed item (i) item (j) was not included, as the list was not intended to be exhaustive.
Japan	NRA	4	2.35 (f)	415	The regulatory body may request a reassessment of safety at the nuclear installation and of the safety of its activities in the light of the following: ... (f) Any changes in site conditions, especially due to climate change or newly identified geotechnical conditions.	It is important to reflect recently identified change of geotechnical or climate conditions on site conditions.		(f) Changes in the site conditions, such as those due to climate change or newly identified geotechnical conditions;		comment incorporated
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	33	2.37 (d)	430	Exclude paragraph.	The requirements and verification of personnel trustworthiness is a matter of nuclear security, which is out of scope of this document, and therefore should be excluded.			X	It states that it needs to be done - not how to do it. It points to further information. Security and safeguards don't have to be kept completely separated.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	26	2.37 New Issue	434	(i) An established safety culture and implemented programmes to strengthen the safety culture.	Please add a new issue - include safety culture		(b) An established and suitable safety culture programme.		added as (b) to 2.37
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	27	2.38	435	After granting of the first license (e.g., the construction license), the regulatory body should ensure that further ~~proposed~~ modifications proposed it its frame are categorized by the licensee in accordance with their safety significance.	Clarification			X	The original wording is clearer.
Pakistan	PNRA	11	2.38	442	**Proposal:** It is proposed that rather than specifying nuclear power plants and equipment as mentioned in Para 2.38 Line 442-443 or Para 3.2c, Line 705, it may be made more generic to cover all nuclear installations	To make it more generic as per scope of the document		Recommendations on modifications in nuclear power plants and research reactors are provided in IAEA Safety Standards Series Nos SSG-71, Modifications to Nuclear Power Plants [14], and SSG-24, Safety in the Utilization and Modification of Research Reactors [15], respectively.		added reference to SSG-24 to cover research reactors in 2.38. 3.2 was not modified, as it specifically relates to alternative licensing processes.
Canada	Canadian Nuclear Safety Commission	4	Para 2.42 (a)	461	"(a) The applicant or licensee should prepare~~, independently review,~~ and submit a comprehensive application to the regulatory body that demonstrates that priority is given to safety, security and safeguards; that is, that the level of safety, security and safeguards meets regulatory requirements and that safety, security and safeguards will be maintained at the site for the entire lifetime of the nuclear installation."	For mature proponents/licensees, with significant experience in application submissions, the extra labour/cost for this independent review and verification of the applicant is unwarranted.	X			
India		5	2.42 (a)	461	The applicant or licensee should prepare, independently review, and submit a comprehensive application to the regulatory body that demonstrates that priority is given to safety, security and safeguards; ***ensuring*** ~~**that is, that the level of safety, security and safeguards meets**~~ regulatory requirements ***are met and*** ~~**that safety, security and safeguards**~~ will be maintained at the site for the entire lifetime of the nuclear installation	For better Clarity		(a) The applicant should prepare and submit a comprehensive application to the regulatory body that demonstrates that priority is given to safety, security and safeguards, ensuring that the regulatory requirements are met and that a high level of compliance with the requirements for safety, security and safeguards will be maintained at the site for the lifetime of the nuclear installation.		intent of comment accepted, with slight modifications
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	17	2.42(b)	466	*«(b) The applicant or the licensee shall conduct an independent verification of the safety analysis* ***using its own resources (by the second party) or by the organization having the required permits (right) for this type of the activity, obtained according to the established procedure from the regulatory authority (by the third party)*** *before it* ***this safety analysis*** *is submitted to the regulatory authority for review."*	Clarification of the requirement for the organizations, which are entitled to perform such preliminary analysis, shall be specified, or the proposed wording shall be accepted			X	The extra detail doesn't provide clarity and may not be applicable to all Member States
Sweden	Swedish Radiation Safety Authority	5	2.42	466	[no proposal, since the text is not understood]	What is supposed to be done by "independent verification" in (b) which is not done by "independently review" in (a)? Clarification is important, especially since the IAEA glossary gives different interpretations of the word "verification".			X	the first bullet talks about reviewing an application. This bullet is only for the safety assessment. Based on other comments, "independently review" has been removed from (a)
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	19	2.42 (c)	468	(c) The applicant or licensee's **organizational structure** should **provide for** ~~have~~ the capability to **perform reviewing the design basis and support documentation** ~~within its own organization (either on-site or within the organization as a whole), even when outsourcing licensed activities, to understand the design basis and safety analyses for the nuclear installation, and the limits and conditions under which it is to be operated~~.	It is recommended to strengthen this role of applicant/licensee			X	The original wording is clearer.
Canada	Canadian Nuclear Safety Commission	5	Para 2.42 (d)	472	"(d) The applicant or licensee should exercise oversight ~~control~~ over all of the work of contractors, especially when outsourcing licensed activities, understand the safety significance of this work ('informed customer' capability) and take responsibility for its implementation."	Emphasize applicant contracting work but would maintain oversight; control may be a bit too strong language.	X			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	34	2.42 (h)	486	Exclude "nuclear security" and change the text to following: "The applicant or licensee should implement ~~nuclear security and~~ emergency preparedness…"	The verification of nuclear security procedures are out of scope of this document.			X	It states that nuclear security needs to be implemented. - not how to do it. Security and safeguards don't have to be kept completely separated

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	5	2.42. (j)-(i)	490	The applicant or licensee for a nuclear installation has the following obligations, roles and responsibilities: ... (j) The applicant or licensee should demonstrate in its application for a licence that it has, or will have when necessary, and will continue to maintain: ~~(k)~~ (i) Adequate financial resources (e.g. depending on national legislation and regulation, for regulatory fees and liability insurance, and for funding of the construction, operation and decommissioning stages and of maintenance). ~~(l)~~ (ii) Adequate human resources to safely construct, maintain, operate and decommission the nuclear installation, and to ensure that regulatory requirements and safety standards are met and will continue to be met.	Items (k) and (l) were associated to item (j) in the earlier versions of Step 7. However, suggested to move under item (j) as its associate message, as these messages are linked to item (j).	X			
Mexico	CNSNS	5	2.42(j)	491	... or will have when necessary, and will continue to maintain: (i) Adequate financial resources (e.g. depending on national legislation and regulation, for regulatory fees and liability insurance, and for funding of the construction, operation and decommissioning stages and of maintenance). (ii) Adequate human resources to safely construct, maintain, operate and decommission the nuclear installation, and to ensure that regulatory requirements and safety standards are met and will continue to be met.	The numbering of items is incorrect. These elements correspond to a different sublevel and should be categorized accordingly.	X			
India		6	2.42 (k)	492	2.42 (a) . . (j) - k - l (m)	Bullet (k) & (l) may be made sub bullet of (j) As these are responsibilities to be taken care under (j)	X			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	18	2.42	492	**«(jj);** **(jjj);»**	Incorrect designation of sub-items: markers (k), (l) are sub-items of item (j), we suggest that the numbering of these markers shall be changed	X			
USA	USNRC	3	2.42 (k) and 2.42 (l)	492	Indent paragraph 2.42 (k) and 2.42 (l) – and relabel (i) and (ii), respectively	Paragraph (k) and (l) appear to be sub-bullets for paragraph 2.42 (j)	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	28	2.44(b)	519	b) The issuing authority: the laws and regulations under which the licence is issued; the official designations of those who are empowered by those laws or regulations to issue the licence and whereby the authorization is deemed to have been granted, e.g. whose signature and stamp should appear on the licence; and the authority to which the licensee will be accountable under the terms of the licence	Regarding digitalisation there might be another way to finally grant a licence beside having a signature and stamp on a written document.		(b)The name of the issuing authority, the laws and regulations under which the licence is issued, the official designations of those who are empowered to issue the licence (e.g. whose signature is on the licence) and the authority to which the licensee will be accountable.		accepted comment with some modfications.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	29	2.44(d)	525	(d) A sufficiently detailed description of the nuclear installation, its location and its activities, including a clear depiction and description of the site boundaries, and ~~other~~ required drawings, as appropriate.	Clarification		replace "required" with "supporting" See Russia-20 for final wording.		there may not be requirements to provide specific drawings
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	20	2.44 d), e)	525	d) A sufficiently detailed description of the nuclear installation, its location and its activities, including a clear depiction and description of the site boundaries, and other drawings, as appropriate **(or a reference to a document comprising it)** (e) The maximum allowable inventories of radioactive sources, including the identification of future expansion of the installation if relevant. **(or a reference to a document comprising this information)**	Such detailed information should not necessarily be an element of a licence but rather should be provided as part of supporting safety analysis documentation			X	the information is expected to be contained in the licence
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	30	2.44(e)	528	e) The maximum allowable inventories of radioactive sources covered by authorizations. ~~, including the identification of future expansion of the installation if relevant.~~	Please delete. Expansion of the installation shall be subjected to the new licencing procedure, if safety relevant. See also 2.40 (e) of SSG-12.		(e) The maximum allowable inventories of radioactive sources, including for any authorized future expansion of the installation, if relevant.		incorporated the intent of the comment but retained the text on future expansion

COMMENTS BY REVIEWER							RESOLUTION			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	35	2.44 (m)	543	Exclude paragraph.	The verification of nuclear security requirements are out of scope of this document.			X	Although security acceptance criteria are outside the scope of this document, omitting the requirement for security plans in the license application could be misleading.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	21	2.44(p)	549	(p) The relationship to other licences; that is, whether the licence is contingent upon a prior authorization or is a prerequisite for a future authorization. Mechanisms should be established so that expiry of an authorization is avoided (if an expiry date is established by the regulatory regime). **This is the case of combined licences.**	This element is applicable to combined licences			X	The example of a combined license is limited; there are other authorizations that could be applicable in other MS
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	31	2.44(s)	556	(s) The ~~length~~ duration of the license	Clarification	X			
Pakistan	PNRA	2	2.44(s)	556	Please modify as below: The ~~length~~ **validity period** of the license	• To harmonize the terminology used in the guide [See Para 2.21(j)].		See Germany-31 for new text		"duration" was chosen to harmonize comments from various countries. 2.21(j) was also changed to "duration".
Sweden	Swedish Radiation Safety Authority	6	2.44	556	"The length of the licence if the licence is time limited."	In Sweden, licences are normally not time limited.		See Germany-31 for new text		"duration" was chosen to harmonize comments from various countries. "unlimited" is also seen as a duration in this context.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	22	2.46	565	***The public shall be given the opportunity to express their points of view at certain stages of the nuclear facility licensing process, as required.***	We propose to delete the second sentence of item 2.46, as it violates the sovereignty of the territories of the IAEA member states. Such recommendation is not applicable in practice		2.43 Members of public should be given an opportunity to present their views during the licensing process for a nuclear installation. If a site is near a State's national border, appropriate coordination, including public participation, with neighbouring State(s) in the vicinity of the nuclear installation, should be arranged.		If a site is near a State's national border, appropriate coordination, including public participation, with neighbouring State(s) in the vicinity of the nuclear installation, is recommended. changed "cooperation" with "coordination" to emphasize that when one State proposes to build near a boundary there should be communication but not an implication that sovereignity is curtailed.
Ukraine	Ministry of Energy of Ukraine	1	2.46	565		'Near' is not a clear definition of the site location. Given that the location of the site may have an impact on international relations, the international documents shall establish more specific conditions for the site location under which appropriate cooperation takes place.			X	Each State's regulatory framework may be different. No attempt is made to harmonize this terminology but kept the recommendation that coordination between the States should occur.
USA	USNRC	4	2.46	565	2.46 The public should be given an opportunity to present their views during ~~certain steps of~~ the licensing process for a nuclear installation, as appropriate.	The term "as appropriate" already clarifies it may not be every step. If "certain steps" is left alone – suggest specifying which steps (e.g., xxxx)	X			
USA	USNRC	6	2.46 and 2.48(d)	565		Paragraph 2.48(d) contradicts Paragraph 2.46. In that Paragraph 2.46 indicates public opportunity is only at **certain steps**, where Paragraph 2.48 indicates public interaction/comments at **all steps** The apparent contradiction should be resolved.	X	Modified text is in USA-5.		"certain steps" deleted
Israel	Nuclear Licensing and Safety Office, IAEC	3	2.47 and 2.48	569	**Transparency** along with public participation in the licensing of nuclear facilities (par. 2.47) and ensuring that **security sensitivities** are respected (par. 2.48), are at least apparently, and partially, contradicting requirements. It could be useful to add a relevant general remark (possibly as a footnote) regarding the necessity to address that issue in **a manner which ensures that overall safety is not compromised.**	Completeness		Instead of a footnote, the concern may be addressed by adding the following to P. 2.48 item (a) (now 2.45(a)): (a) The regulatory body and licensee should provide easy access to relevant and comprehensive information relating to safety and to the licensing process and licensed activities. Such information should be published where it can be easily accessed, such as on the internet and in other mass media. The goal of transparency should be balanced with applicable laws protecting intellectual property and sensitive information.		comment addressed through modification to 2.48(a)

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	32	2.48	581	a) … such as on the internet and in ~~the~~ other mass media.	Clarification (the internet is part of mass media.)	X			
Japan	NRA	6	2.48 (d)	588	Throughout the lifetime of the nuclear installation, the public participation process, including participation of local, national and international interested parties, should be open, transparent, well described and balanced, and should ensure that security sensitivities and commercial proprietary information are respected. For example: (a)…. (b)…. (c)The public should be given the opportunity to present their opinions at meetings and formal hearings and via other appropriate means of communication. These comments may be addressed at appropriate steps of the licensing process, in accordance with national regulatory framework. (d) ~~Comments from the public should be addressed at all steps of the licensing process.~~	The opportunity of the public to submit comments is different among States, and the text suggested to be revised as proposed.		(d) Comments from the public should be addressed and their resolution should be appropriately documented at appropriate steps of the licensing process, in accordance with the regulatory framework.		Kept as a separate bullet and changed text in combination with other comments.
Mexico	CNSNS	3	2.48 (e), (f) (new fractions)	588	2.48 Throughout the lifetime of the nuclear installation, the public participation process, including participation of local, national and international interested parties, should be open, transparent, well described and balanced, and should ensure that security sensitivities and commercial proprietary information are respected. For example: … **(e) Multilateral or bilateral arrangements for cooperation and assistance among States regarding nuclear accidents should be publicly available for consultation.** **(f) Members of the public should be informed of their civil liability rights and the authorities they can contact in the event of a nuclear accident.**	Public awareness of compensation rights and clear state protection in the event of a nuclear accident could enhance public confidence, acceptance, and engagement.			X	this text would not be a suitable place to adress these topics. e) is about international coorperation and ermegency preparation, not licensing. f) is about public information, not public consultation.
USA	USNRC	5	2.48(d)	588	(d) Comments from the public should be addressed, with the necessary and appropriate documentation, at all steps of the licensing process.	Specifying/clarifying that responses to public comments should be documented.		(d) Comments from the public should be addressed and their resolution should be appropriately documented at appropriate steps of the licensing process, in accordance with the regulatory framework.		Purpose of the comment is maintained but wording is changed in combination with other comments.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	33	2.55	634	A graded approach should be applied to emergency preparedness and response requirements (see ~~para. 4.19~~ Requirement 4 of GSR Part 7 [16]). ~~If a nuclear installation is sited near industrial sites or population centres, the impact of an emergency could have a significant impact on the nearby industrial site or population.~~ The potential consequences of the hazards identified should be assessed taking into account the impact of an emergency on the neighbouring population, industrial sites and environment. ~~Additionally~~ For this purpose, e.g. the impact of size, technology and possible underground siting of the nuclear installation should be assessed.	We suggest to modify this para to be consistent with the recommendations and the wording of Requirement 4 of GSR Part 7. We also suggest referring to the entire Requirement 4 of GSR Part 7, since the graded approach does not only consider hazards to be grouped into categories (para. 4.19 of GSR Part 7).		2.51 During the licensing process, the regulatory body should ensure that the licensee has applied a graded approach to the arrangements for emergency preparedness and response (see para. 2.20 of GSR Part 1 (Rev. 1) [1]), in accordance with the requirements established in IAEA Safety Standards Series No. GSR Part 7, Preparedness and Response for a Nuclear or Radiological Emergency [18].		Purpose of the comment is maintained but wording is changed in combination with other comments.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	34	2.55 (alternativ)	634	~~A graded approach should be applied to~~ The licence should ensure that the emergency preparedness and response requirements (see para. 4.19 of GSR Part 7 [16]) are adequately fulfilled. If a nuclear installation is sited near industrial sites or population centres, the impact of an emergency could have a significant impact on the nearby industrial site or population. Additionally, the impact of size, technology and possible underground siting of the nuclear installation should be assessed.	Clarification: the requirements have to be fulfilled in an adequate way in relation to the risk profile of the nuclear installation. Avoid compromising safety due strong encouragement of using graded approach.			X	Germany comment #33 was accepted with modifications.

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	7	2.55	634	2.55. A graded approach should be applied to emergency preparedness and response requirements (see para. 4.19 of GSR Part 7 [16]). If a nuclear installation is sited near industrial sites or population centres, the impact of an emergency could have a significant impact on the nearby industrial site or population. Additionally, the impact of size~~,~~ and technology ~~and possible underground siting~~ of the nuclear installation should be assessed.	Suggested underground siting to be deleted, as GSR Part 7 does not state anything about underground siting, and no additional statement on underground siting is provided in this draft publication.		2.51 During the licensing process, the regulatory body should ensure that the licensee has applied a graded approach to the arrangements for emergency preparedness and response (see para. 2.20 of GSR Part 1 (Rev. 1) [1]), in accordance with the requirements established in IAEA Safety Standards Series No. GSR Part 7, Preparedness and Response for a Nuclear or Radiological Emergency [18].		Purpose of the comment is maintained but wording is changed in combination with other comments, for both
Sweden	Swedish Radiation Safety Authority	7	2.55	638	"underground siting of the nuclear installation should be considered, using a graded approach."	The last sentence of the paragraph lists things that should be considered in an asssessment, rather than being assessed themselves. It is also things that should be considered more or less thouroghly, depending of the risk the nuclear facility poses.		2.51 During the licensing process, the regulatory body should ensure that the licensee has applied a graded approach to the arrangements for emergency preparedness and response (see para. 2.20 of GSR Part 1 (Rev. 1) [1]), in accordance with the requirements established in IAEA Safety Standards Series No. GSR Part 7, Preparedness and Response for a Nuclear or Radiological Emergency [18].		Purpose of the comment is maintained but wording is changed in combination with other comments.
Pakistan	PNRA	10	3.1	642	**Addition of a bullet point:** The licensing process for as nuclear installation will normally include the following steps, depending on national legislation: a------g **h. Long Term Operation (LTO) of nuclear installations**	To add an important aspect in the lifetime of a nuclear installation			X	long term operation is counted under operation, according to the list of phases in the lifetime as used in other IAEA publications.
Israel	Nuclear Licensing and Safety Office, IAEC	4	Paragraphs 3.1, 3.2 and 3.49	642	Possible partial **overlap** between licensing of specific three stages (construction, commissioning and operation), is addressed in paragraph 3.49. **Combining licenses** for two stages is explained in paragraph 3.1 and first sub-paragraph of par. 3.2. We suggest considering adding the possibility of **overlapping** between consecutive licensing stages in general, earlier in this section, possibly in paragraph 3.1 too - as an additional possibility (not only full combination but also partial overlap of licensing stages is a quite common possibility).	Completeness			X	internal referencing is not desirable, and the suggested items are covered in 3.1 and 3.49.
Sweden	Swedish Radiation Safety Authority	8	3.1	651	(f) Decommissioning ~~(or closure for certain installations)~~;	It is hard to see what kind of nuclear installation that can just be closed down with no need of decomissioing actions. If there are such installations, please exemplify.	X			disposal is out of scope of nuclear installations so parenthetical should indeed be deleted.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	23	3.1	655	Combining authorizations or licences (e.g. for **siting and** construction ~~and operation)~~ **may help to optimize costs of construction and time of the installation commissioning** ~~also give more predictability to the process for the licensee~~.	Combining different types of activity should not contradict the graded approach		(e.g. for siting and construction or for construction and operation)		rest of comment is not accepted as it focusses more on economical aspect than on safety and as such should be included in a SSG.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	35	3.2	673	… In such contexts, the regulatory body may consider, in advance, early approval of sites and certification of standardized plant designs. International cooperation on design certification may also help to facilitate the licensing process. ~~The regulatory body may also consider using information from another regulatory body to make a regulatory decision, on the basis that the regulatory body receiving the information understands the regulatory basis and considers the local specificities and arrangements.~~ The applicant may then …	The regulatory bodies are encouraged to exchange experiences. However, the safety is not to be compromised by using the information from another regulatory bodies. The licencing process is based on an independent review by the regulatory body following the valid national regulations. It is of paramount importance, especially regarding to political changes and influence in different countries. See also para. 3.2 of SSG-12.			X	the statement is a may statement, and the use of another regulatory body's information may be essential as more designs are being licensed and resources are constrained.
Israel	Nuclear Licensing and Safety Office, IAEC	5	Paragraphs 3.2(a), and 3.2(b)	687	**Early site permits** and **certified standard design** of nuclear installations are addressed in paragraphs 3.2 (a) and (b), respectively. We suggest adding a relevant remark, clarifying that: "**An early site permit may later require appropriate amendments if during specific design stages the need for site requirements - not included in the early site permit – arise".**	Clarity and Completeness			X	The suggestion is not a global practice, as in some cases the ammendements would be made in the following permits/licenses.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	24	3.2(a)	690	**A preliminary** regulatory body approval of the site or sites **prior to submission of a licence application** may be **obtained provided that the design of installation is specified by the applicant** ~~done without the applicant having identified a specific design for the nuclear installation~~.	The installation design should be specified in advance, because the siting conditions for large nuclear installations differs significantly from e.g. SMRs			X	The suggested change is not in line with the goal of the text. Note that this text does not mean that this practice would be acceptable in all member states, it just gives examples how things could be performed in general.

COMMENTS BY REVIEWER							RESOLUTION			
Sweden	Swedish Radiation Safety Authority	9	2.3	691	Remove the sentence "Regulatory body approval of the site or sites may be done without the applicant having identified a specific design for the nuclear installation."	This sentence is contradictory to what is written on line 667. Since similar nuclear design is a prerequisite for a combined license, the design has to be known before site approval.			X	it is not a contradiction as line 667 states 'especially', not 'only'. The circumstance of having a similar design is not meant as a strict requirement.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	36	3.2(c)	704	Manufacturing licence. In such a licensing process, an applicant may apply for a manufacturing licence, to manufacture ~~a nuclear power reactor,~~ a nuclear installation notwithstanding …	Clarification: address the scope of the document. This statement is relevant to all nuclear installations.	X			
Ukraine	Ministry of Energy of Ukraine	2	3.2 (d)	709	Combined license. In such a licensing process, an applicant can apply for a single license to construct and commission a nuclear installation. If the license is issued, and if the installation is constructed in accordance with the requirements set forth in the license, the regulatory body should then allow the plant to begin commission. If the licensing process is to be simplified in this manner, the inspection process should be made sufficiently rigorous to ensure that all safety requirements are fulfilled. The regulatory body will then need to have adequate capabilities and resources to manage its own inspection process and to monitor all safety related activities during the construction and commissioning stages. Key hold points — such as fuel loading, power increase, addition of another type of installation or modules, or other technical points, as appropriate — may be imposed on the licensee. In such a simplified licensing process, an applicant could be allowed to refer to an early site permit and a standard design certification as part of its application for a combined license for construction and commissioning of a nuclear installation. The regulatory body would then consider as resolved all matters that were resolved in connection with the granting of the early site permit and the standard design certification. The applicant, however, could be allowed to request an exemption from one or more elements of the certified design; such exemptions should be granted if regulatory requirements are fulfilled and safety is considered adequate after review and assessment by the regulatory body.	In our opinion, this clause requires clarification regarding the issuance of a combined license by the regulatory authority that covers construction, commissioning, and operation. Since the issuance of an operational license for a nuclear facility follows the verification of test results for equipment and systems, as well as the final safety analysis report of the facility—both of which are carried out during the construction and commissioning stages—the combination of licenses for these stages of the life cycle is not appropriate.		Combined license. In such a licensing process, an applicant can apply for a single license to perform multiple stages (for example, construction and operation). If the licensing process is to be combined in this manner, the inspection process should be made sufficiently rigorous to ensure that all safety requirements are fulfilled. The regulatory body will then need to have adequate capabilities and resources to manage its own inspection process and to monitor all safety related activities during the various stages. Key hold points — such as fuel loading, power increase, addition of another type of installation or modules, or other technical points, as appropriate — may be imposed on the licensee. In such a simplified licensing process, an applicant could be allowed to refer to an early site permit and a standard design certification as part of its application for a combined The applicant, however, could be allowed to request an exemption from one or more elements of the certified design; such exemptions should be granted if regulatory requirements are fulfilled and safety is considered adequate after review and assessment by the regulatory body.		Licenses may be merged or combined as appropriate to facilitate the regulatory process. This means the possibillities will always be member state specific, and combinations will only take place if the regulatory framework allows it. However, the combination of construction, commissioning and operation as an example was put forward too specifically, and has been removed.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	37	3.2(d)	718	…Key hold points — such as fuel loading, first criticality, power increase, ~~addition of another type of installation or modules, or~~ other technical points, as appropriate — may be imposed on the licensee.	Construction of an additional reactor block, especially dealing with another type of nuclear installation shall be subjected to the new independent licencing procedure. Safety is not to be compromised by softening the procedure while extending the nuclear site, which may lead to increasing the nuclear risk.		Key hold points — such as fuel loading, first criticality, power increase, addition of modules (when in scope of the granted licence), or other technical points, as appropriate — may be imposed on the licensee.		incorporated part of the comment
Slovak Republic	JAVYS, a.s.	4	3,4	735	From the text in para 3.40 and onwards, it might seem that the need for a radioactive waste and spent fuel management plan is related to the decommissioning plan. The need to have a realistic, adequate and (also politically) approved national radioactive waste and spent nuclear fuel management plan available, which also considers the management of radioactive waste that will be generated in a given nuclear installation, as well as the radioactive waste management plan of the given nuclear installation derived from it, should logically "be on the table" already during the design licensing process. We are of the opinion that the way of management the need for an adequate solution for the radioactive waste and spent fuel management is insufficient for the licensing stages, starting with design licensing. Better solution example of this can be the concept of this matter in Appendix II. There it is naturally understandable: there are no analogues for radioactive waste management in Small Modular Reactor facilities, especially in the case of their advanced technologies, and completely new, previously untested approaches are already developed today and will be applied and licensed in the future.	This comment is not fundamental in nature; it is aimed only at improving the text.			X	The sentence at the start of 3.40 (Before the first nuclear material is allowed to be brought onto the site, an initial decommissioning plan, including a waste management plan, should be submitted to the regulatory body.). Also, the SSR2,3 and 4 are very clear on the requirements with regards to the waste management plan.
Ukraine	Ministry of Energy of Ukraine	3	3.4	735		We recommend indicating possible criteria for the proximity of the site to state borders (indicative distances or methods for their assessment), at which it is required to hold consultations with neighboring countries.			X	The context of what is to be considered 'near' is not for IAEA to define. It follows from jurisprudention with regards to for example, the Arhuss and Espoo treaties.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	38	3.5	742	The site evaluation should also consider the potential impact of the nuclear installation and its activities on the environment, ~~and~~ the neighbouring population, and nearby industrial sites, and a preliminary assessment should be performed to verify that no incompatibilities are foreseen.	We suggest to include “nearby industrial sites”, especially in the context of possible SMR-licensing.			X	The effect on enviroment and population is in scope of safety. The effect on industry might not be. (not the effect of industry on the installation, this is clearly safety, but the other way around, eg. the effect of the installtion on reliabillity of operation of nearby industry.)
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	25	3.5	742	Paragraph 3.5 is proposed to read as follows: Site evaluation is analysis of those factors at a site that could affect the safety of a facility or activity on that site [2]. This includes site characterization, including identification of external hazards, (natural and human induced), acceptability for decommissioning purposes, and consideration of factors that could affect the safety features of the nuclear installation or its activities and result in a release of radioactive material and could affect the dispersion of such material in the environment.	Requirement 5: The regulatory body shall regulate all aspects of decommissioning throughout all stages of the facility’s lifetime, from initial planning for decommissioning during the siting and design of the facility, to the completion of decommissioning actions and the termination of authorization for decommissioning.			X	it would be inconsistent to name a specific phase, as this part is focused on the siting effects with regards to safety in all phases.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	39	3.6	753	For a nuclear installation, according to para. 1.16 of SSR-1 "The suitability of the site is then confirmed in the site evaluation process. The site evaluation process starts with the second stages of the setting process (i.e. site selection), and continues throughout the entire lifetime of the nuclear installation. The detailed site evaluation (for the selected site) provides input to the preliminary safety analysis report and the final safety analysis report. Site evaluation continues throughout the operational stage of the nuclear installation, and includes monitoring, periodic safety review and other activities to confirm the site specific design parameters as well as safety re-evaluations based on the outcome of periodic safety reviews". ~~following site selection, site evaluation typically involves the following stages [2]:~~ ~~(a) Site selection stage. One or more preferred candidate sites are selected after the investigation of a large region, the rejection of unsuitable sites, and screening and comparison of the remaining sites.~~ ~~(b) Site characterization stage. This stage is further subdivided into:~~	While the IAEA Safety Glossary contains exactly this explanation for site evaluation, this wording is not present anymore in the new version of NS-G-3.6, namely DS531 – now in Step 12. Is there another Safety Guide on site evaluation with the current description? If not – we suggest rather use the statement from SSR-1, para 1.16 instead.	X			Section 3.6 was deleted as it provided a list of steps and was duplicative to SSG-35 and to the IAEA Glossary.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	26	3.6	753	The monitoring requirements should be extended beyond step (d) to step (c). Step (b) should be supplemented by analysis of regional monitoring data.	Dangerous and unfavorable engineering-geological processes that are not diagnosed during engineering-geological surveys can be characterized only by monitoring data.		see justification		comment is no longer valid as text was changed. Aim of this comment is considered in that revision.
Sweden	Swedish Radiation Safety Authority	10	3.6(d)	769	"…monitoring and periodic…"	A word is missing.		see justification		comment is no longer valid as text was changed. Aim of this comment is considered in that revision.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	40	3.6 New issue	770	Appropriate safety related site evaluation review activities should be performed throughout the decommissioning of the nuclear facility, mainly by means of monitoring, as well.	It is essential, that site evaluation review activities should be performed in the decommissioning stage as well, please add.			X	Section 3.6 was deleted as it provided a list of steps and was duplicative to SSG-35 and to the IAEA Glossary.
Italy	National Inspectorate for Nuclear Safety ad Radiation Protection(ISIN)	1	3.8	776	A radiological and non radiological study of the region, including an appropriate baseline survey	Also possible initial conventional pollutants have to be identified as baseline survey to exclude future responsibilities of the operator of the nuclear installation				Discussion: Scope of IAEA is radiological safety, non-radiological issues would be out of the scope of this publication, as they are also out of scope of SSR-1
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	27	3.8	779	Paragraph 3.8 (line 779) is proposed to read as follows: A radiological study of the region, including an appropriate baseline survey, is required to be performed before commissioning of the nuclear installation (see para.7.3 of SSR-1 [17]). This study and survey should be provided to the regulatory body as the baseline for future analyses following operation and establishment of end-state criteria after decommissioning of the nuclear installation.	7.7. A baseline radiological site survey should be planned and performed for the proposed site of the planned facility and its surrounding area to establish background concentration levels of radionuclides of natural and artificial origin for use in assessing the future impact of the facility. The licensee should identify the key radionuclides and the media (e.g. soil and sediment or surface water and groundwater) to be sampled and measured, so the results can be used for: (a) … (b) b) Establishment of end state criteria and demonstration of compliance with the proposed end-state.	X			
Finland	STUK	1	3.9(a)(i)	780	Add geology	Are geological issues included in this part? They were in the older version, but now it only mentions geography.	X			
Israel	Nuclear Licensing and Safety Office, IAEC	6	3.9(b)(i)	815	Regarding population density and distribution, it is suggested to add the possibility of expected **future impacts** foreseen from existing information on planned developments in neighboring areas and resulting future demographic changes.	Completeness	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	41	3.10	835	Requirements for the design of nuclear installations are established […]	Editorial	X			

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	8	3.14 3.15	852	The design of the proposed nuclear installation should be such that safety requirements can be met ~~in accordance with the design basis~~. The contents of proposed design ~~basis is~~ should include the range of conditions and events taken explicitly into account in the design of SSCs and equipment of the nuclear installation, in accordance with established criteria, such that the nuclear installation can withstand them without exceeding authorized limits [2]. The applicant for authorization for construction should submit ~~a basic~~ the design to the regulatory body for approval before construction begins. This ~~basic~~ construction design can be approved ~~or, depending on the regulatory framework, frozen (i.e. no change may be made to the basic design without the regulatory body's review and approval) or partly frozen~~ with a regulatory instrument upon the review and assessment of the regulatory body. During the design, the systematic analysis of the interfaces between safety measures, security measures and safeguards arrangements should be implemented in order to support the demonstration of fulfilment of Requirement 8 of SSR-2/1 (Rev. 1) [20], Requirement 11 of SSR-3[21] and Requirement 75 of SSR-4 [22]. The regulatory body should clearly indicate the contents of the design required at this stage, as well as detailed design provided in para. 3.15. 3.15.During construction and throughout the lifetime of the nuclear installation, parts of the detailed design may be subject to approval ~~or may be frozen~~. Such approvals or processes ~~for freezing a detailed design~~ should be undertaken by means of regulatory instruments, and conditions should be attached, as appropriate. If the licence applications for construction and operation are made concurrently (i.e. a combined licence), parts of the detailed design should then be reviewed by the regulatory body in the course of application for the construction and operation licence.	Distinction between basic design (para 3.14) and detailed design (para 3.15) should be defined by regulatory body of each Member State. In addition, message on "frozen" is suggested to be deleted, as the plant status would be retained as the configuration approved through license (i.e. frozen configuration) until the next approval for modification would be issued. Furthermore, "partly frozen" is "partially melted" in other words, which imply that configuration approved through license may be changed without other approval by the regulatory body. This situation is not allowed. From this view, "partially frozen" should be deleted.			X	The deletion of the term basic and detailed design is rejected as these terms are more widely used then alternatives such as 'construction design, operation design, etc.'. Furthermore, the first part, is on the desing basis, which is something different to the basic design and should be maintained as proposed. Also, the notion of freezing a design is considered an importance practice in most member states, allthough not in all, justifying the use of a 'may' statement.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	42	3.18	896	The objectives of defence in depth for a nuclear installation, as ~~stated~~ depicted in Ref. [23], are:	Ref. [23] is INSAG-10, INSAG-Report. For us it is important to avoid interpretations, that these objectives are resulting from any IAEA Safety Guide, and are result of Consensus. Word "state" is too close to "statement", that is why rewording is suggested.		3.16\ The objectives of defence in depth for a nuclear installation are [26]:		the meaning of the comment is accepted with changes.
India		4	3.20	918	In preparing an application for a licence for the design of a nuclear installation, the following should be verified by the licensee or applicant: (a)… (b)… (h) **That adequate arrangements for safe and secure on-site storage and / or transport of radiative material from and to the site are in place.**	For completeness and not overlooking important safety and security aspects in licensing process.			X	As in some states this would result in overlap with the waste management and/or the transportation is not part of the nuclear installation license, this comment was rejected. The list is specifically mentioned not to be limited.
USA	USNRC	7	3.22	954	Revise as follows: "(d) Arrangements for in-service inspection and testing, surveillance and maintenance;"	Adding "in-service testing" provides completeness.		"(d) Arrangements for in-service inspection, testing, surveillance and maintenance;		Comment accepted, but revised textually (deleted 'and' in the middle of a listing of items).
Sweden	Swedish Radiation Safety Authority	11	3.22(j)	961	Remove "in the design organization"		X			
Sweden	Swedish Radiation Safety Authority	12	3.22(k)	962	Remove "for design personnel".	It is not reasonable to use the codes (as is stated in the beginning of para. 3.22) to improve training and certification requirements for the design personnel.	X			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	28	3.24(a)	979	Delete the statement in sub-item "a"	We propose to delete the statement in sub-item "a" of item 3.24, as it establishes uniform rules for all types of the facilities, which contradicts the differentiated approach specified in items 2.51 - 2.55 of the submitted draft document. Thus, excessively strict requirements are set for all the types of facilities, including those with low potential hazard			X	These items need to be reviewed and assessed regardless of type of nuclear facility (See SSR-2/1, SSR-3 and SSR-4).

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	43	3.24 New issues	997	(k) Safety criteria for analyses, particularly those relating to - if applicable - common cause events, cross-link effects, the single failure criterion, redundancy, diversity and physical separation; (l) Verification and validation of the safety analyses and evidence of their robustness (e.g. sensitivity studies, research, testing, operating experience in other nuclear installations).	In the current Specific Safety Guide No. SSG-12 "Licensing Process for Nuclear Installations" the corresponding Para 3.25 contains the points (j), (k) and (l). These points are deleted in the draft DS539. While the aspects about radioactive discharges from point (j) are coved in other sections (2.52, 3.20, 3.28) of the draft, the important design aspects of potential high risk nuclear installations (k) (common cause events, cross-link effects, the single failure criterion, redundancy, diversity and physical separation) and verification and validation of the safety analyses and evidence of their robustness (l) are now missing. These aspects might not be applicable to all types of nuclear installations. However, in the case of potential high risk nuclear installations (e.g. standard light water reactors), these aspects are very important to ensure safety. These two points should therefore be re-added; see the proposed slightly new text.		(k) Safety criteria for analyses, particularly those relating to, if applicable, common cause events, cross-link effects, the single failure criterion, redundancy, diversity and physical separation; (l) Verification and validation of the safety analyses and evidence of their robustness (e.g. sensitivity studies, research, testing, operating experience in other nuclear installations).		
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	44	3.24 New issues	997	· Radioactive discharges and radioactive releases into the environment, and radiation exposure of workers and the public during normal operation and under accident conditions; · Safety criteria for analyses, particularly those relating to common cause events, cross-link effects , the single failure criterion, redundancy, diversity and physical separation; Verification and validation of the safety analyses and evidence of their robustness (e.g. sensitivity studies, research, testing, operating experience in other nuclear installations).	Important safety relevant issues are missing. Add them. See also para. 3.25 of SSG-12.		(k) A description of the planned radioactive discharges and radioactive releases into the environment, and the radiation exposure of workers and the public from radioactive releases during normal operation and under accident conditions.		Only first bullet, with modifications, is added since the other two was accepted within the scope of previous comment.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	45	3.27	1009	The proposed arrangements for the safe management of radioactive waste should ~~may~~ be included in the application for a licence for the design of a nuclear installation	Waste management should be included at the beginning of the licensing process - similar to the radioactive discharges (para. 3.28). In addition, para. 3.26 (e) mentions that decommissioning and waste management should be considered in the design of a nuclear installation.	X			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	46	3.27	1009	It is necessary to substantiate the stability of isolation properties of safety barriers at storage and disposal of radioactive waste for the period of their potential hazard, taking into account external and impacts on safety barriers and internal processes within the storage (disposal) system.	The need for safe management of spent nuclear fuel and the technical and economic performance of a nuclear facility project.			X	this comment is overly specific for the document and was not deemed essential.
USA	USNRC	8	3.27	1016	Specifically, the regulatory body should ensure ~~satisfy itself~~ that the waste and/or waste packages:	Provide consistency with the rest of the Draft Safety Guide and ensures there is not a misunderstanding of expectations when using two different phrases The phrase "satisfy itself" is only used two times throughout the entire document.		modified "satisfy itself" to "verify"		verify chosen as a better verb
USA	USNRC	9	3.28	1029	Specifically, the regulatory body should ensure ~~satisfy itself~~ that radioactive discharges	Consistency with the rest of the Draft Safety Guide. The phrase "satisfy itself" is only used two times throughout the entire document.		modified "satisfy itself" to "verify"		verify chosen as a better verb
Sweden	Swedish Radiation Safety Authority	13	3.28(a)	1030	"Will be properly characterized and managed in compliance with national law and regulatory requirements."	National law may also be applicable, at least in Sweden.		added national legilsation to 3.28 (now 3.27), "The applicant or licensee should, in compliance with national legislation, propose arrangements for managing radioactive discharges…"		including national legislation in the overarching paragraph instead of having the regulatory body verify that it meets national legislation

COMMENTS BY REVIEWER							RESOLUTION			
Sweden	Swedish Radiation Safety Authority	26	3.28(c)	1032	(c) Will be kept as low as reasonably achievable.	This is the current text in SSG-12. There is no reason to abandon the As Low As Reasonably Achievable (ALARA) principle in radiation protection. Potentially requiring unreasonable efforts to reduce discharges conflicts with a rational use of resources. The volume of discharge may serve functions related to safety or radiation protection, e.g. maintaining reactor cooling or maintaining underpressure. Putting an additional requirement unrelated to safety or radiation protection on the system risks necessitating reduced safety margins or radiation protection margins to satisfy the new requirement, for uncertain gain. In addition, from a public and environmental protection perspective, it is not always beneficial to concentrate radioactivity in smaller discharge volumes while maintaining the same minimized total activity.	X			
Sweden	Swedish Radiation Safety Authority	27	3.28(c)	1032	(c) Will be minimized in terms of activity.	Note: This comment is only applicable if comment 1 above is rejected. The volume of discharge may serve functions related to safety or radiation protection, e.g. maintaining reactor cooling or maintaining underpressure. Putting an additional requirement unrelated to safety or radiation protection on the system risks necessitating reduced safety margins or radiation protection margins to satisfy the new requirement, for uncertain gain. In addition, from a public and environmental protection perspective, it is not always beneficial to concentrate radioactivity in smaller discharge volumes while maintaining the same minimized total activity.			X	comment #26 above accepted.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	46	3.29(d)	1048	Minimisation ~~Optimization~~ of occupational exposure when gaining access to SSCs.	Consider keeping old version - “minimization” should be the goal.			X	Optimization is a better term that takes into account various factors. (d) changed to "Optimization of protection and safety when gaining access to SSCs."
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	47	3.29 New issues	1055	· Minimization of the amount of radioactive waste. The safe management of the radioactive waste and spent fuel generated throughout the lifetime of the installation.	Important safety relevant issues are missing. Add further bullets. See also Para 3.31 SSG-12.			X	this content is covered by 3.27
USA	USNRC	10	3.30	1056	Ageing effects should be addressed in the design stage in order to identify appropriate ageing management measures ~~for the future~~ to be implemented at the appropriate time.	As written, it presupposes that the ageing management would be addressed at a **future** time. Proposal suggests that aging management measure should be implemented when it is **appropriate**. Example – selection of a more degradation resistant material in the design phase. Implementation of controlled water chemistry at beginning of life for nuclear installation.		3.29 The applicant or licensee should state how Aageing effects on a nuclear installation should beare addressed in the design stage in order to identify appropriate ageing management measures to be implemented at the appropriate timelater. This should include the actions for ensuring the integrity of the nuclear installation until the end of decommissioning.		intent of comment accepted, with slight modifications
USA	USNRC	11	3.30	1058	Ageing effects should be addressed in the design stage in order to identify appropriate ageing management measures for the future. This should include the actions for ensuring the integrity of the nuclear installation until the end of decommissioning. Aging management concerning decommissioning should be considered periodically especially upon license renewal, subsequent license renewal and upon request to extend decommissioning beyond the required period.	Aging management requirements are not developed in the U.S. for decommissioning reactors. Other members may also be in a similar situation.			X	proposed text is duplicative to the existing text and is unnecessary

COMMENTS BY REVIEWER							RESOLUTION			
Sweden	Swedish Radiation Safety Authority	14	3.31	1059	"The licensee should review, audit and be responsible for certifying suppliers and contractors with functions relating to safety. As appropriate, the regulatory body may review, assess and inspect such review, audit and certification processes. The regulatory body may also directly grant certificates or licences to suppliers and contractors in its own State, as appropriate, in accordance with the national regulatory framework."	The new wording is not applicable to all MS. The old wording of para 3.33 was more appropriate. Therefore our proposal is to write para 3.31 as para 3.33 is written today. In Sweden, it is up to the licensee to certify their suppliers. The regulator has the responsibility to supervise or review this work, but we do not certify their suppliers or contractors.		"The licensee should review, audit and be responsible for certifying suppliers and contractors with functions relating to safety. As appropriate, the regulatory body may review, assess and inspect such review, audit and certification processes. The regulatory body may also directly grant certificates or licences to suppliers and contractors ~~in its own State~~, as appropriate, in accordance with the national regulatory framework."		The design review and assessment usually carried out during the authorization of the construction. Reviewing the Licensee's system for review, audit and certification processes might be too late. Original wording was more clear and coinsice. However, regulatory bodies may choose to grant certificates to suppliers or contractors abroad.
Sweden	Swedish Radiation Safety Authority	15	3.34(e)	1087	"A report describing the initiating events that will be used to dimension the emergency preparedness."	There is no need for an emergency preparedness plan to start construction of the nuclear facility, but as a regulator we want to see the initiating events that will be used to set up the emergency preparedness.			X	The preliminary plan for emergency preparedness may include the information requested separately. The content of the report is not clear or obvious with proposed wording. Changed to: (e) The preliminary emergency plan;
USA	USNRC	12	3.35	1093	[5] Applicants may apply for permission to start manufacturing of long lead equipment before ~~grant of~~ a construction license is granted to manage the project schedule after demonstrating compliance with relevant safety requirements.	Provide clarity in the sentence.		edited footnote: To manage the project schedule, applicants may apply for permission to start the manufacturing of long lead equipment before a construction license is granted and after demonstrating compliance with relevant safety requirements.		agree with comment and reordered text to enhance readability
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	36	3.36 (e)	1109	Exclude “nuclear security” and change the text to following: “Emergency response (including fire protection measures)…”	The review, assessing, and inspection of nuclear security measures are out of scope of this document.			X	Security is considered under licensing, and there was a desire to provide more guidance on security aspects.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	48	3.36 New subitem	1124	- The applicant or licensee should have an implemented safety culture as well as programmes to strengthen the safety culture.	Please include safety culture.		"The applicant or licensee should have implemented a safety culture programme."		agree with comment and added with slight modification
Finland	STUK	2	3.38	1138	Remove “If a regulatory body intends to visit premises in another State, the visiting regulatory body should inform the regulatory body of the State in which the 1142 premises are located, after approval from both States”	The regulatory body of the State has no authority to bar the visiting regulatory body to visit the State.		now 3.36 - If a regulatory body intends to visit premises in another State, the visiting regulatory body should inform the regulatory body of the State in which the premises are located.		Agreeing on the rationale, approval of both states was deleted from the sentence. The remaining part is a collaboration between the regulatory bodies.
Ukraine	Ministry of Energy of Ukraine	4	3.38	1138	If part of the supply chain is in other States, the regulatory body should ensure that there are legally binding arrangements allowing the necessary access to documents and to the premises of all relevant organizations. If a regulatory body intends to visit premises in another State, the visiting regulatory body should inform the regulatory body of the State in which the premises are located, after approval from both States. Regulatory inspection in other States might not be possible, but it may be possible for the regulatory body to visit the premises of vendors or manufacturers in other States jointly with the regulatory body of that State. Wherever restrictions exist for joint regulatory review, it should be ensured by actual verification that the supply chain meets the necessary standards.	The proposal to include legally binding arrangements in the license conditions, which would allow the regulatory authority to gain necessary access to the production facilities of all relevant organizations, effectively imposes such an obligation on the licensee. Furthermore, the first sentence of this clause specifies that it is the regulatory authority’s responsibility to ensure that legally binding arrangements are in place, enabling it, in cooperation with the regulatory authority of the state where the production facilities are located, to conduct site visits. It should also be noted that, as part of the regulatory authority’s approval of factory acceptance testing (FAT) programs for safety-critical equipment, systems, etc., the regulatory authority reserves the right to participate in FAT at the manufacturer’s site, as outlined in the FAT programs.			X	The ability to include arrangements in the licence condition should be retained.

COMMENTS BY REVIEWER							RESOLUTION			
Mexico	CNSNS	4	3.40	1154	3.40 Before ~~the first nuclear material is allowed to be brought onto the site~~ **any construction activity is authorized**, an initial decommissioning plan, including a waste management plan, should be submitted to the regulatory body. Requirements for preparing a decommissioning plan are established in IAEA Safety Standards Series No. GSR Part 6, Decommissioning of Facilities [26]. The decommissioning plan submitted ~~during~~ **before** the construction stage of a nuclear installation should demonstrate that: ...	Although the primary function of the regulatory body is to ensure safety, it is recommended that the initial decommissioning plan be required before any construction activities begin. This is because such activities are a key part of the project's economic and technical feasibility analysis, as well as of all actions that will take place once the facility is no longer generating operational income. The feasibility of any project must be assessed prior to its execution, starting from the construction phase, and a poor evaluation by the regulatory body of the decommissioning and site release plans could result in wasted time and financial resources for both the licensee and the regulator.			X	The GSR Part 6 para. 7.4. states that "The licensee shall prepare and submit to the regulatory body an initial decommissioning plan together with the application for authorization to operate the facility." While the member states may choose to request the initial plan earlier, it is not among the requirements of IAEA at this time.
Ukraine	Ministry of Energy of Ukraine	5	3.40	1154	«Before the first nuclear material is allowed to be brought onto the site, an initial decommissioning plan, including a waste management plan, should be submitted to the regulatory body. Requirements for preparing a decommissioning plan are established in Safety Standards Series No. GSR Part 6, Decommissioning of Facilities [26]. The decommissioning plan submitted during the construction stage of a nuclear installation should demonstrate that:»	The paragraph states that the requirements for preparing a decommissioning plan are outlined in GSR Part 6. However, according to Section 7.4 of GSR Part 6, 'The licensee shall prepare and submit to the regulatory body an initial decommissioning plan together with the application for authorization to operate the facility…,' meaning the licensee is required to submit the initial decommissioning plan for the transition from the commissioning stage to the operational stage of the nuclear facility. This requirement in Section 7.4 of GSR Part 6 contradicts Clause 3.40 of the draft document, which specifies that the initial decommissioning plan is to be submitted during the construction phase, a provision we believe is correct. We propose amending Section 7.4 of GSR Part 6 accordingly:		3.38 Before the first nuclear material is allowed to be brought onto the site, the applicant should submit an initial decommissioning plan, including a waste management plan, to the regulatory body. Requirements for preparing a decommissioning plan are established in IAEA Safety Standards Series No. GSR Part 6, Decommissioning of Facilities [28]. This initial decommissioning plan should demonstrate that:		Text adjusted to not conflict with GSR Part 6
USA	USNRC	14	3.40(a)	1163	The assessed liability should be estimated on the basis of the price and cost levels prevailing at the time the decommissioning plan is submitted, adjusted for inflation through the projected license termination date**,** to the regulatory body, and should be reviewed periodically. Costs related to research of decommissioning first-of-a-kind designs should also be included in the cost estimate.	Inflation at 2% per year is used by US to ensure licensee has the funds to complete decommissioning. Also, for first of a kind reactor designs or experimental designs removal of the fuel may benefit research studies. For example, the Peach Bottom Unit 1 experimental He Cooled Graphite Reactor, removal of the activated graphite may be used in research.		(a)Sufficient funds to decommission the nuclear installation will be available at the end of operation (see Ref. [29]). This should include the costs associated with spent fuel management and radioactive waste management and disposal based on reasonable estimates. Costs related to research in relation to the decommissioning first-of-a-kind designs should also be included in the cost estimate. (b)The assessed liability, estimated on the basis of costs prevailing at the time the decommissioning plan has been submitted to the regulatory body. This estimate should be adjusted for inflation through the projected licence termination date, and should be reviewed periodically.		accepted with modifications.

COMMENTS BY REVIEWER							RESOLUTION		
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	49	3.40(a)	1168	… Mechanisms should be implemented for accumulating funds through the projected lifetime of the nuclear installation. In addition, provisions should be made such that appropriate funds can be made available in the event that the nuclear installation is shut down prior to the end of its planned life. (aa) As necessary, a legal framework should be established for securing decommissioning funds and for protecting them from being used for other purposes.	Split the bullet (a). It deals with two different topics: - Availability of the funds for decommissioning. - Legal framework for securing decommissioning founds.		(a) Sufficient funds to decommission the nuclear installation will be available at the end of operation (see Ref. [29]). This should include the costs associated with spent fuel management and radioactive waste management and disposal based on reasonable estimates. Costs related to research in relation to the decommissioning first-of-a-kind designs should also be included in the cost estimate. (b) The assessed liability, estimated on the basis of costs prevailing at the time the decommissioning plan has been submitted to the regulatory body. This estimate should be adjusted for inflation through the projected licence termination date, and should be reviewed periodically. (c) Mechanisms have been implemented for accumulating funds through the projected lifetime of the nuclear installation. In addition, provisions should be made such that appropriate funds can be made available in the event that the nuclear installation is shut down prior to the end of its planned life. (d) As necessary, legal mechanisms have been established for securing decommissioning funds and for protecting them from being used for other purposes. (e) A process has been established for further development of the decommissioning plan. The plan should be reviewed periodically (e.g. in light of new techniques or information, ageing management and design changes that might affect		Agree with the comment and have split (a) into 4 sub-bullets
USA	USNRC	15	3.40(a)	1169	…license condition or other ~~a~~ legal framework should be established for securing decommissioning funds and for protecting them from being used for other purposes.	Good approach but member state could also use license conditions to prevent use of the funds for other purposes.		As necessary, legal mechanisms should be established for securing decommissioning funds and for protecting them from being used for other purposes.		changed to legal mechanisms.
USA	USNRC	13	3.40(b)	1171	A system has been established for further development of the decommissioning plan. The plan should be reviewed and submitted for approval, as necessary, periodically in the light of such things as the decision to use new techniques or information, and aging management and design changes that may impact the ease of decommissioning.	Text added to clarify that changes to be made to the facility must be reviewed by the regulator as well as impacts of design changes on ease of decommissioning is important.		(e) A process has been established for further development of the decommissioning plan. The plan should be reviewed periodically (e.g. in light of new techniques or information, ageing management and design changes that might affect decommissioning) and submitted for approval by the regulatory body.		agree with comment and incorporated with minor changes, in what is now bullet (e)
Finland	STUK	5	3.43	1187	commissioning -> testing	Is this in line with IAEA terminology?			X	Para. 2,19 of SSG 28 Commissioning of NPPs defines the commissioning stages as non-nuclear testing and nuclear testing.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	50	3.43	1187	Non-nuclear testing is performed to ensure, ~~to the extent possible,~~ that the nuclear installation has been constructed, and the equipment has been manufactured and installed, correctly and in accordance with the design specifications.	Clarification	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear	51	3.44	1193	Nuclear testing is a major step in the licensing process performed to confirm that the nuclear installation is safe before proceeding to routine operation. Commencement of nuclear testing should normally require an authorization or additional licence from the regulatory body since it involves the introduction of radioactive material (see para. 6.3 of SSR-2/2 (Rev. 1) [28])). If there are deviations from design parameters, they should be analysed by the licensee and reported to the regulatory body, which should carry out the necessary review and	Add further recomendations, as some important safety relevant issues are missing. See also para. 3.51 SSG-12.			X	This concept is covered by 2.20 and by 3.52.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	52	3.46	1212	… The regulatory body may choose to witness these tests in the manufacturing premises, when applicable. In particular, the introduction of nuclear or certain types of radioactive material into the nuclear installation marks a significant step in the commissioning procedure and is often considered the point at which the main regulatory decisions are made.	Please add further recommendations. Important safety relevant issues are missing. See also para. 3.45 SSG-12.			X	This is covered by 3.44.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	44	3.47	1214	3.47 Completed SSCs important to safety should be put into service only when they have been inspected, tested **and accepted by the licensee to service based on the documented results of acceptance tests.** ~~approved by the licensee as being in accordance with the requirements set out in the design as agreed by the regulatory body.~~	The QA requirement		3.47 Completed SSCs important to safety should be put into service only when they have been inspected, tested and approved/accepted by the licensee, based on the documented results of acceptance tests, as being in accordance with the design requirements.		Agree with the comment and made some further edits
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	30	3.48	1217	*«…physical start-up or power increase,* ***the regulatory authority shall approve in due time the decommissioning plan for the nuclear facility****, as well as the regulatory authority shall finalize the review …».*	Additional requirements for approval of the decommissioning plan for the nuclear facility by the regulatory authority at this stage are described in item 3.40 of this document on the basis of it. 7.10 in SSG-47, as well as the IAEA documents detailing this Procedure are provided in item 3.40			X	GSR Part 7 does not require the approval of the initial Decommisioning Plan which needs to be submitted to the regulatory body for review and assessment before the authorization of the operation. The submission of the initial decommissioning plan has been addressed in para. 3.40.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	37	3.48 (c viii)	1246	Exclude paragraph.	The review, assessing, and inspection of nuclear security measures are out of scope of this document.			X	Security is considered under licensing, and there was a desire to provide more guidance on security aspects.
Sweden	Swedish Radiation Safety Authority	16	3.49	1250	"When several nuclear facilities are built at the same site, there may be some overlap between the construction, commissioning and operation stages. Individual…"	The proposal makes the paragraph easier to understand. Up till this paragraph "a nuclear installation" can be interpreted as, for example, a (one) reactor, not several.		3.49There may be some overlap between the construction, commissioning and operation activities; for example, individual SSCs or an entire unit may already be commissioned or in operation before construction of the entire nuclear installation is complete. The applicant or licensee should demonstrate that these interactions are considered in the safety case.		modified to clarify that it applies to all nuclear installations (not just reactors) and the interactions could apply to a single facility.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	53	3.51	1265	Before the start of nuclear testing, staff members with functions relating to safety should be suitably trained and qualified and, where appropriate, should be licensed before being allowed to perform their functions. The regulatory body ~~may~~ should review, inspect and license, as appropriate, during the commissioning stage and later on during operation, any organization that provides training and qualification for staff with safety related functions.	Please install this as a should-statement.		3.49 Before the start of nuclear testing, staff members with functions relating to safety should be suitably trained and qualified and, where appropriate, should be licensed before being allowed to perform their functions. The regulatory body should review, inspect and, where appropriate, license, any organization that provides training and qualification for staff with safety related functions.		incorporated with slight modification.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	54		1278	~~LICENSING~~ APPROVAL OF THE OPERATION OF A NUCLEAR INSTALLATION	To be consistent with the title of the other subheadings; moreover, all stages are part of the entire licensing process		AUTHORIZATION OF THE OPERATION OF A NUCLEAR INSTALLATION		authorization is the correct term in line with the glossary (changed accordingly in all section heads)
Sweden	Swedish Radiation Safety Authority	17	3.55(a)(iv)	1301	[no proposal, but a question]	Is safeguard culture an established concept? I can't find it in any other IAEA publication. It may be premature to include it in SSG-12 (several places).		deleted "safeguards"		to remove ambiguity
USA	USNRC	16	3.55(b) 3.55(c) 3.55(d)	1302	(b) Management expectations ~~issues~~: (c) Competence expectations ~~issues~~: (d) Operating experience expectations ~~issues~~:	The use of the word "issues" did not seem appropriate for the context of guidance being provided in the subsequent text.		3.53 To obtain a licence for the operation of a nuclear installation, the applicant or licensee should demonstrate that the following meet the regulatory body's expectations: a) Safety b) Management c) Competence d) Operating experience		rephrased the introduction paragraph and adjusted subtitles accordingly
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	55	3.55 (b)(ii)	1305	Adequate p~~P~~rocesses and procedures for the control of modifications to the nuclear installation, including design modifications and their implementation ~~by graded approach~~;	The requirements have to be fulfilled in an adequate way in relation to the risk profile of the nuclear installation. Avoid compromising safety due strong encouragement of using graded approach.			X	graded approach is assumed in implementation of management systems and should be consistent with risk profile of the installation
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	29	3.56	1334	***"- chemical technologies;*** ***- hydraulic facilities;*** ***- automation and control systems;*** ***- electrical systems and communication systems;*** ***- repair;*** ***- modification;*** ***- control system;*** ***- technical support, etc.)***	It is required to complete the list as mentioned in the text, as the document considers not only reactor installations of nuclear power plants; it can include radiochemical plants and other nuclear industry production facilities		3.56 changed to "The following are examples of programmes that may be subject to approval by the regulatory body, as appropriate:"	X	the suggested list does not appear to qualify as "programmes"
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	38	3.56 (e)	1345	Exclude paragraph.	The approval of nuclear security programme is out of scope of this document.			X	while the document scope does not address nuclear security criteria, inclusion of a programme is part of the licensing process
Pakistan	PNRA	3	3.56(p)	1356	Please add the scope of program as below: Environmental qualification **of SSCs**;	• For clarity of scope. • To make it in-line with Para 3.22(b).	X			
Sweden	Swedish Radiation Safety Authority	18	3.57(f)	1393	"Criteria for starting the installation after long term shutdown or after module replacement"	The paragraph can otherwise be read as "criteria for….module replacement".	X			
Sweden	Swedish Radiation Safety Authority	19	3.58	1397	"Before issuing an operating licence, or authorization,…"	The proposal reflects the writing of paragraph 3.54.		3.56 Before issuing a licence for the operation of a nuclear installation, the regulatory body should verify that:		3.54 also changed to "license"
USA	USNRC	17	3.58(b)	1403	The licensee has a programme for analysing accessible information regarding developments and changes in regulations, construction or reuse of buildings within the footprint that may impact decommissioning cost or ease of decommissioning, procedures, documents and recommendations from organizations that collect information on experiences relevant to nuclear safety.	Adds clarity and focus on new builds or reuse of building that may impact decommissioning.			X	focus of this paragrpah is on operational experience; level of detail is too narrow
Sweden	Swedish Radiation Safety Authority	20	3.59	1416	"operate in compliance with the operating licence and safety requirements, as appropriate. Resumption…"	In Sweden, safety regulation is stated in laws and regulations, not in the license.			X	the licensee needs to operate the installation in accordance with the license, which may reference laws and regulations if needed.
Slovak Republic	JAVYS, a.s.	5	Section "Safety review of a nuclear installation"	1419	In the section "Safety review of a nuclear installation", it seems to us that little emphasis is placed on the need for a comprehensive assessment of past operation, including events that have occurred and their solutions and consequences.	This comment is not fundamental in nature; it is aimed only at improving the text.			X	this is covered by 3.64(b) - Operating experience includes past experience at the installation

COMMENTS BY REVIEWER							RESOLUTION			
Sweden	Swedish Radiation Safety Authority	21	3.60	1420	"Over the full operating lifetime of a nuclear installation, the regulatory body should require the person or organization responsible for the nuclear installation and its activities to provide, when necessary or at appropriate intervals, evidence in the form of a safety review that the installation remains fit to continue operation. For time limited licenses, this may be a part of the licensing renewal process."	For NPPs in operation with licenses without time limitation, periodic safety reviews are not part of a licensing renewal process.	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	56	3.61(d)	1441	~~When a substantial part of the installation, such as a reactor, is replaced~~. In case of major modifications to the facility or activity.	Clarification Reactor is not just a part of the facility, it is the facility itself. Its replacement requires more steps (e.g. decommissioning and dismantling of old facility, design and construction of the new one). Each of these steps requires a full licensing procedure not only a safety review.		(d) In case of major modifications to the installation or activity or if improvements and modifications to the installation are necessary to maintain safety.		modified to narrow down to installation and shifted text from further down.
Sweden	Swedish Radiation Safety Authority	22	3.61(d)	1441	Remove (d)	If a part of the installation is changed, the effect on the safety analysis etc. has to be evaluated. If there is any significant effect on the safety analysis, they have to be updated. It doesn't matter if the modification affects a substantial part of the installation or not.			X	this item was revised due to other comments. Not removed because this paragraph does not negate that safety reviews may need to be performed due to regulatory requirements.
Pakistan	PNRA	4	3.67	1500	The said paragraph refers SSG-48 on 'Ageing Management and Development of a Programme for Long Term Operation (LTO) of NPPs'. It is suggested to briefly highlight or refer the relevant licensing aspects of LTO under new heading i.e. 'Long term operation of a nuclear installation' in order to cover operation beyond design life under licensing umbrella.	• To integrate all the licensing steps of nuclear installations in a single coherent process. • To streamline the structure of guide as 'Long term shutdown of a nuclear installation' is also mentioned above Para 3.69 (Line 1524). • To establish link of LTO with licensing process. • To upgrade the licensing process.			X	LTO is covered under the subject of safety reviews.
Japan	NRA	9	3.67. (e)	1514	Recommendations on ageing management are provided in IAEA Safety Standards Series Nos SSG-48, Ageing Management and Development of a Programme for Long Term Operation of Nuclear Power Plants [32], and SSG-10 (Rev. 1), Ageing Management for Research Reactors [33]. Ageing management plays a central role in the periodic safety review. As part of the licensing process, the regulatory body should verify the existence of an ageing management programme. There are certain essential elements of ageing management, and these should be considered by the regulatory body in assessing the licensee's safety analyses. Such essential elements include: (a) An understanding of the installation's design basis; (b) A rigorous programme for equipment qualification (for design, construction and modifications); (c) Identification of actual service conditions (actions to be taken during the design, construction, commissioning and operation stages); (d) An understanding of material properties and possible ageing mechanisms; (e) Identification of ~~mechanical and thermal loadings~~ stressors on the structure or component; (f) A knowledge of the ageing of SSCs due to physical and chemical processes, or due to SSCs becoming out of date or obsolete due to knowledge and technology evolution, the associated changes in codes and standards or ageing of human skills, knowledge, competence; (g) A systematic ageing management programme.	Essential elements to be considered in assessing the licensee's safety analyses should include not only the mechanical and thermal loads, but also the effects of activation and so on.		Identification of stressors on the SSC;		agree with comment and used SSC
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	45	3.69	1525	3.69 The licensee should submit to the regulatory body for authorization **the safety case for operation** ~~of specifications for maintaining the safety, security and safeguards needs~~ of the nuclear installation during long term shutdown[8]. **Based on the regulatory body's review results, modifications to operating licence conditions and to operating documentation could be introduced as necessary.** ~~The regulatory body should review, assess and inspect such specifications and may attach conditions.~~	The principal thing is safety substantiation, while the term "specifications" is more ambiguous.			X	submittal of the safety case for extended shutdown operations is not generally required. Focuse is on ensuring authorization basis is maintained.
USA	USNRC	18	3.69	1527	[8] Long term shutdown is a state in which there is no current intention in return to normal operation in the near term. Long term shutdown ~~that~~ is different from refueling outage, maintenance, inspection or refurbishment, during which the nuclear installation is not in operation (e.g., a nuclear installation may be in long term shutdown just before its decommissioning, or for economic, political and other reasons).	As written, it was described what "long-term shutdown" is **not** but it did not describe what it is. Suggest providing a bit of context or explanation what "long term shutdown" is See suggestion.	X			

COMMENTS BY REVIEWER							RESOLUTION			
Mexico	CNSNS	6	3.70	1529	3.70 Long term shutdown should be justified by the licensee, and related plans and programmes should be subject to agreement by the regulatory body. Long term shutdown needs to be managed in a safe manner by the person or organization responsible for the nuclear installation and its activities, and should be subject to regulatory control, especially regarding: (a) waste storage; (b) spent fuel management; (c) fire protection and suppression, radiation protection, and (d) fulfilment of safety functions. During long term shutdown, a safety review should also be performed to help maintain safety.	Consistency throughout the entire document.		3.67 Long term shutdown should be justified by the licensee, and related plans and programmes should be subject to approval by the regulatory body. Long term shutdown needs to be managed in a safe manner by the person or organization responsible for the nuclear installation, and should be subject to regulatory control, especially regarding: (a) Storage of radioactive waste; (b) Spent fuel management; (c) Fire protection and suppression; (d) Radiation protection; (e) Fulfilment of safety functions. 3.68 If a nuclear installation has been shut down for a long period, before it is returned to operation the regulatory body may require the licensee to perform a safety review and to re-engage with the licensing process, as appropriate.		incorporated with slight modification.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	47	3.70	1529	At the licensing stage of a nuclear installation, the justification of a radioactive waste repository should include information on the possibility or impossibility of its further transfer to a final disposal facility and on the arrangements necessary for such transfer.	The loading of radioactive waste into storage shall be carried out in accordance with a design that can completely eliminate the possibility of converting the storage facility to a disposal facility. The management of radioactive waste from a nuclear facility (including its final disposal site) should be considered from the outset.			X	Comment seems to be adressed at a different publication.
Ukraine	Ministry of Energy of Ukraine	6	3.71	1536		At the same time, we believe this clause needs to be amended to clarify the term 'for a long period,' as it is unclear what duration will be considered 'long,' after which the regulatory authority may require the licensee to perform a safety review and re-engage with the licensing process before resuming operations			X	Rejected as naming a number, i.e. the definition on what is considered long is not in scope of the publication, and is at the discretion of each regulatory body.
Japan	NRA	10	3.72. 3.72(d) 3.73	1540	3.72At the end of its operating lifetime, the nuclear installation should enter a phase of post- operational decontamination and reduction of ~~hazards~~ hazardous materials to move towards a more passively safe state. Post-operational activities could be carried out under the current operating licence or the decommissioning licence. Radiation protection considerations may necessitate that certain activities are delayed to allow radioactivity to decay and radiation exposures to be reduced. To facilitate this process, some activities relevant to decommissioning (see paras 3.74–3.86) may be performed after shutdown of the nuclear installation under licence provisions carried over from the operating stage. Such activities include: (a)Management of operational waste; (b)Measurements to determine the inventory of radioactive material; (c)Removal of nuclear fuel; (d) Post-operational decontamination and reduction of ~~hazards~~ hazardous materials (including removal of liquids, materials relating to the original operation and other mobile hazardous materials for disposal or safe storage). 3.73After post-operational decontamination and removal of ~~hazards~~ hazardous materials, safe storage or enclosure (‘mothballing') and interim storage may be permitted; for example, to allow for radioactive decay.	The term ‘hazards’ used in these two paragraphs is suggested to be replaced by “hazardous materials” for clarification.	X			

COMMENTS BY REVIEWER							RESOLUTION			
USA	USNRC	19	3.72	1543	Post-operational activities should ~~could~~ be carried out under a license that is appropriate for the activities. ~~current operating licence or the decommissioning licence.~~	The US does not have a decommissioning license and decommissioning can occur as long as the license in place covers the activities even if it is called an operating license or a possession only license.		Post-operational activities should be performed under an authorization that is appropriate for the activities (e.g. the current operating licence or a decommissioning licence).		incorporated with slight modifications.
France	ASNR	1	3.72	1546	"*some activities relevant to decommissioning (see paras 3.74–3.86) may be performed after* **the permanent** *shutdown of the nuclear installation under licence provisions carried over 1546 from the operating stage*"	For consistency with GSR Part 6 about "permanent shutdown" (see footnote page 1). "The term 'permanent shutdown', as used in this publication, means that the facility has ceased operation and operation will not be recommenced."	X			
France	ASNR	2	3.72	1548	"Such activities [relevant to decommissioning] include: (a) Management of operational waste;"	The management of operational waste have to be carried out as the facility is operated and must not be postponed until decommissioning, especially for new facilities. The activities linked to the management of operational waste are therefore not new at the stage of permanent shutdown.	X			
France	ASNR	3	3.72	1551	"Post-operational activities could be carried out under the current operating licence or the decommissioning licence […] (d) Post-operational decontamination and reduction of hazards (including removal of liquids, materials relating to the original operation and other mobile hazardous materials for disposal or safe storage"	In some cases, the removal of decontamination may require the implementation of a specific process, not covered by the current operating licence and may therefore require a specific authorization request.		Post-operational activities should be performed under an authorization that is appropriate for the activities (e.g. the current operating licence or a decommissioning licence).		modified due to other comments
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	48	3.72	1554	Para 3.72 contains a list of activities relevant to decommissioning may be performed after shutdown of the nuclear installation under license provisions carried over from the operating stage. One more bullet could be included in this list: (e) Assessment of physical aspects	№ SSG-47 Para 5.29. The integrity and the condition of the buildings and the SSCs should be assessed at the end of the operational stage from the perspective of decommissioning needs	X	(d) Assessment of the integrity and the condition of SSCs;		
France	ASNR	4	3.73	1555	"*3.73 After post-operational decontamination and removal of hazards, safe storage or enclosure ('mothballing') and interim storage may be permitted; for example, to allow for radioactive decay*" **To be deleted.**	This sentence is not consistent with GSR Part 6 where "safe storage" is associated to "deferred dismantling" and is not a concern during post-operational activities. The sentence should be deleted.			X	The sentence is okay as it is, and is consistent with GSR part 6. 'mothballing' was removed.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	57	3.73	1555	After post-operational decontamination and removal of ~~hazards~~ hazardous materials, safe storage or enclosure ('mothballing') and interim storage may be permitted; for example, to allow for radioactive decay.	Clarification	X			
USA	USNRC	20	3.73	1555	After post-operational decontamination and removal of hazards, safe storage or enclosure ('mothballing') ~~and~~ , interim storage may be permitted; for example, to allow for significant safety benefits from radioactive decay.	Clarifies the purpose of interim storage.		3.70 After post-operational decontamination and removal of hazardous materials, interim safe storage may be permitted; for example, to allow for significant safety benefits from radioactive decay.		

COMMENTS BY REVIEWER							RESOLUTION			
France	ASNR	5	3.74	1558	"**The licensee should inform the regulatory body before to shutting down a facility permanently**"	Add a new paragraph addressing the notification by the licensee to the regulatory body when the decision is taken to permanently shutdown a nuclear installation. This notification is essential to agree on the period for submitting the final decommissioning plan. To be consistent with GSR Part 6 (§ 3.4 p. 10 and §7.9).		Accepted but added to paragraph 3.72.		Agree with comment; adding to the first paragraph (3.69) seemed more logical
France	ASNR	6	3.75	1565	"*3.75 An updated,* ~~***detailed***~~ *final decommissioning plan and its supporting* **documents** ~~***safety assessment***~~ *is required to be submitted by the licensee to the regulatory body for approval, prior to commencement of decommissioning activities (see Requirement 11 of GSR Part 6 [26]).*"	For consistency with GSR Part 6 Requirement 11.	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	58	3.75	1565	~~An updated, detailed final decommissioning plan and its supporting safety assessment is required to be submitted by the licensee to the regulatory body for approval, prior to commencement of decommissioning activities (see Requirement 11 of GSR Part 6 [26])~~	We suggest to delete this para from here and to move it to para 3.80. Reason: order of statements should be adjusted: according to our experience (Germany) decommissioning licensing includes typically two (or more) licensing steps: 1st - General framework and processes, 2nd - Dismantling of relevant components such as the reactor pressure vessel and bioshield). These steps require separate hold points.	X			Moved to 3.78
Pakistan	PNRA	5	3.75	1565	Please add Management System for decommissioning as following: Before granting an authorization or a licence for the decommissioning of a nuclear installation, the regulatory body should also review, assess and inspect that management system submitted by licensee covers all aspects of decommissioning (See Requirement 7 of GSR Part 6).	• To make it consistent with other stages of licensing process in this guide as Management System for other stages is also indicated in the following steps: - Design [3.26] - Construction [3.34(a)] - Commissioning [3.48(b)(i)] - Operation [3.55(b)(i)]		3.73 Before granting an authorization for the decommissioning of a nuclear installation, the regulatory body should also review and assess and, as appropriate, inspect the licensee's management system to verify that it covers all aspects of decommissioning (See Requirement 7 of GSR Part 6 [28]).		agree with comment, with slight modifications
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	49	3.75	1565	Propose to remove words: "updated" and "detailed". An updated, detailed final decommissioning plan and its supporting safety assessment is required to be submitted by the licensee to the regulatory body for approval, prior to commencement of decommissioning activities (see Requirement 11 of GSR Part 6 [26]).	GSR Part 6 required to update decommission plan several times. GSR Part 6 do not does not apply the definition of detailed to the final decommissioning plan.		3.77 As part of the licensing process for a nuclear installation, an up to date, final decommissioning plan and its supporting documents are required to be submitted by the licensee to the regulatory body for approval, prior to commencement of decommissioning activities (see Requirement 11 of GSR Part 6 [28]).		updated changed to up-to-date. Detailed removed
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear	59	3.75 A New issue	1567	Decommissioning comprises: the preparation and approval of a detailed decommissioning plan; the actual decommissioning activities; the management of waste arising from these activities; demonstration that the decommissioning end point is achieved; and the updating of all existing safety related documents, as appropriate, including documents on physical protection and emergency response and the plan for remediation of the site.	Important safety relevant issues are missing. Please add new para on the decommissioning between 3.75 and 3.76.			X	this text is already covred in the footnote #9 related to paragraph 3.74.
Pakistan	PNRA	6	3.76	1568	Guidance regarding decommissioning substages and relevant authorizations may also be provided.	• For harmonization with other licensing stages. • The substages for site evaluation and commissioning stage have been also described in Para 3.6 and 3.42 of this guide.			X	The decommissioning steps have been sufficiently defined in the document.
USA	USNRC	21	3.78	1576	Decommissioning should only be authorized after the safe implementation of the management of radioactive waste, demonstrated by the licensee through inspection consistent with the ~~in a~~ waste management strategy that is part of the decommissioning plan.	Waste management programs should be based on the same requirements as when operating. The demonstration should be always inspected and not part of licensing authorization. Transportation routes should be studies as part of the licensing process before implementation.		3.75 Decommissioning should only be authorized after the licensee has demonstrated the safe management of radioactive waste in accordance with a waste management strategy that is part of the decommissioning plan.	X	accepted comment, except for inspection statement, which was deemed too specific and not a universal approach
France	ASNR	7	3.80	1585	"3.80 As part of the licensing process for a nuclear installation, the decommissioning plan 1585 should be reviewed, **approved**, *assessed and inspected by the regulatory body"*	For consistency with GSR Part 6 (§ 3.3 page 8-9)			X	existing language is sufficient. The regulatory body needs to verify that decommissioning activities can be done safely.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	60	3.80	1585	An updated, detailed final decommissioning plan and its supporting safety assessment is required to be submitted by the licensee to the regulatory body for approval, prior to commencement of decommissioning activities (see Requirement 11 of GSR Part 6 [26]). As part of the licensing process for a nuclear installation, the updated and detailed, final decommissioning plan …	Expedient merger of two paras, current one and statement from para 3.75.		3.77 As part of the licensing process for a nuclear installation, an up to date, final decommissioning plan and its supporting documents are required to be submitted by the licensee to the regulatory body for approval, prior to commencement of decommissioning activities (see Requirement 11 of GSR Part 6 [28]). The decommissioning plan should be reviewed, assessed and inspected by the regulatory body to verify that decommissioning activities can be accomplished safely with a progressive and systematic reduction of radiological hazards		Sections combined, including edits from other Member States
USA	USNRC	22	3.80	1589	The decommissioning plan is required to include the selected decommissioning strategy; the schedule, type and sequence of decommissioning actions; the waste management strategy; and the proposed end state, to include the basis for and identification of the clean-up levels, for the nuclear installation	Clarification that the final state also must include the basis and levels that are required to be met for release.			X	The concept of clean-up levels is not mentioned in GSR-6. (It is deemed a country specific interpretation of end state, so naming the end state covers this)
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	39	3.80	1592	Change the text to following: "The decommissioning plan should also specify the requirements for on-site and off-site monitoring~~, as well as for nuclear security and surveillance during decommissioning~~."	The requirements for nuclear security are out of scope this document and therefore should be excluded.			X	Security is not out of scope for SSG-12.
Sweden	Swedish Radiation Safety Authority	23	3.83	1604	"II.18) the regulatory body…"	Off-site decommissioning is mentioned in II.18, not II.15.	X			
France	ASNR	8	3.84	1606	Add the following "**The preferred decommissioning strategy shall be immediate dismantling.**"	To ensure consistency with GSR Part 6 (Requirement 8, § 5.1, p.10)		3.81 The preferred decommissioning strategy is required to be immediate dismantling (see 5.1 of GSR Part 6 [29]).		accepted with slight modifications.
USA	USNRC	23	3.84	1606	Where it is proposed to defer dismantling in whole or in part (see para. 1.9 of GSR Part 6 [26]), it should be demonstrated that there will be no undue burden on future generations and that the safety benefits outweigh immediate dismantling. Undue burden from cost based on site-specific factors that would not be applicable to others in similar situation due to the absence of those site-specific factors should also be considered. Deferral of dismantling should be justified on a case-by-case basis to the regulatory body.	Benefits should be safety based or shown to be an undue cost burden based on site-specific factors that others in a similar situation would not have to address because of the lack of the site-specific circumstances.			X	by simply saying benefits, we don't have to weigh in on cost… There may be other benefits besides safety as well - including environmental.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	50	3.85	1615	Paragraph 3.85 is proposed to read as follows: In dismantling a nuclear installation, activities such as decontamination, cutting and handling of large equipment, and the progressive dismantling or removal of some existing safety systems have the potential to create new hazards. The safety analyses for the nuclear installation should therefore be reviewed and updated as dismantling progresses. In particular, in reviewing an application for a licence for decommissioning, the regulatory body should consider the following aspects during the decommissioning stage: (a) Waste storage; (b) Spent fuel management (see para 8.10 of GSR Part 6 [26])	GSR Part 6 para 8.10 If operational radioactive waste or nuclear fuel is present in the facility after its permanent shutdown, such material shall be removed prior to the conduct of decommissioning actions and shall be transported to an authorized facility in compliance with the applicable transport regulations [11]. In case such removal is not possible during the period of transition between permanent shutdown and the granting of the authorization for decommissioning, the approved final decommissioning plan shall address the removal of these materials as part of decommissioning (during initial phases of immediate dismantling or during the preparatory phase for safe storage). In both cases, the management of such material shall be carried out in accordance with the relevant requirements	X			(just the reference of 'b' was added)

COMMENTS BY REVIEWER							RESOLUTION			
Ukraine	State Nuclear Regulatory Inspectorate of Ukraine	1	3.85(b)	1622	(b) Spent fuel management (in case if removal of spent fuel is not possible during operation period or transition period from operation to decommissioning).	Provisions of the IAEA document GSR Part 6 “Decommissioning of Facilities”: 1.20. The management of fresh nuclear fuel and the management of spent nuclear fuel and of radioactive waste generated during the operational phase of a facility are not usually considered part of decommissioning. These are addressed as part of the operation of the facility and are outside the scope of this publication. However, the management of waste from decommissioning is within the scope of this publication. 8.10. If operational radioactive waste or nuclear fuel is present in the facility after its permanent shutdown, such material shall be removed prior to the conduct of decommissioning actions and shall be transported to an authorized facility in compliance with the applicable transport regulations [11]. In case such removal is not possible during the period of transition between permanent shutdown and the granting of the authorization for decommissioning, the approved final decommissioning plan shall address the removal of these materials as part of decommissioning (during initial phases of immediate dismantling or during the preparatory phase for safe storage). In both cases, the management of such material shall be carried out in accordance with the relevant requirements [10]. Also, similar provisions are specified in the document SSG-47 «Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities» (1.20, 3.22, 7.18, 7.19, 8.42, 8.43).		(b) Spent fuel management (see also para. 8.10 of GSR Part 6 [29]);		see above Russia comment 50. We added in the reference to GSR part 6 which states this preference)
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	61	3.85 New issue	1633	k) Effects of decommissioning actions on the building structure of the nuclear installation.	As dismantling progresses, new transport ways are established. This includes openings in the inner building structure with possible effects on the stability of the building structure are made.		Effects of decommissioning activities on civil structures		
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	62	3.85 New issue	1633	l) Effects on other nuclear installations at the site.	During the licensing it shall be at least defined that during the planning phase of any decommissioning action there will be checks regarding possible effects on other nuclear installations at the site. E. g. possible effects of the demolition of the cooling towers on buildings nearby such as interim storage facilities.		Effects of decommissioning activities on other nuclear installations on the same site.		
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	63	3.85 New issue	1633	l) The safety-related design and suitability of decontamination and dismantling techniques and equipment.	With respect to the radiation exposure of workers in particular, the mentioned properties of decontamination and dismantling techniques are of essential importance. During the licensing a set of standard techniques shall be described and assessed.		l) The suitability of decontamination and dismantling techniques and equipment.		Safety related design is considered a mistranslation from German to English, the English term should not be used in this context. Bullet (i) was replaced with the modified text
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	64	3.85 New issue	1633	m) Possible impacts on the nuclear installation from within and outside the nuclear installation	With analyzing and assessing the possible impacts of disruptions, incidents and severe accidents the necessary safety measures (e. g. systems of the nuclear installation that are still required) can be identified. Furthermore, the assessment of possible impacts is essential for the evaluation of the radiation exposure of workers, the public and the environment.			X	This is already covered by the expanded list.

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	65	3.85 New issue	1633	n) Qualification of the staff.	During decommissioning an adequate qualification of the (responsible) staff must be ensured.			X	This doesn't seem like the proper place for this item, and it is covered in item 3.4 "— Ensuring that properly trained, qualified and competent staff are available for the decommissioning project."
France	ASNR	9	3.86	1634	"*3.86 A final decommissioning report is required to be prepared, supported by appropriate 1634 records, and should be submitted to the regulatory body* **for review and approval** *(see para. 9.1 of GSR Part 6 [26] and 1635 Annex II of SSG-47 [34]).*"	For consistency with GSR Part 6, § 9.1 and because this document is addressing the licensing process.		3.83 A final decommissioning report is required to be prepared and be submitted to the regulatory body for review and approval (see para. 9.1 of GSR Part 6 [28]. Further information is provided in annex II of SSG-47 [36]).		accepted with slight modifications.
USA	USNRC	24	3.88	1648	The regulatory body should provide guidance on ~~radiological criteria for~~ the removal of regulatory controls (terminate the license) over the decommissioned nuclear installation and the site and should ensure that an adequate system is implemented for properly managing this removal.	Radiological criteria for removal of regulatory controls should be the same during operations. The regulatory body should have guidance on how to terminate the license- what is needed to be demonstrated for review for acceptability.		3.85 The legal and regulatory framework is required to establish criteria for the release of the decommissioned nuclear installation and the site from regulatory control (see para. 2.5(17) of GSR Part 1 (Rev. 1) [1]). The regulatory body should ensure that a system is implemented for properly managing this release.		Text modified based on other feedback.
USA	USNRC	25	3.90	1666	The survey is to be conducted at the completion of the decommissioning activities for each portion of the site, as agreed upon in the decommissioning plan, and should be examined by the regulatory body to verify that the regulatory criteria and decommissioning objectives have been fulfilled	Each survey unit is a unit of compliance and can be closed out at different times as long as cross-contamination controls are in place. As, assumptions, such as radionuclide surrogate fractions, should be verified as part of the review of the survey data for compliance demonstrations.			X	This is not mentioned in GSR Part 6, and hence it was decided to not include the wording as suggested. There would be nothing in the document that would suggest this this not being done if the regulator approved it.
Canada	Canadian Nuclear Safety Commission	6	New Para 3.92	1670	"Depending on a country's safeguards agreement, the decommissioned facility will remain, in perpetuity, inspectable by the IAEA even though it is released from regulatory control. This encumbrance on the facility needs to pass to future owners of the facility, who may or may not have any nuclear experience."	This may be country dependant, but in Canada the INFIRC/164/Add.1 Safeguards agreement between Canada and the IAEA includes, in perpetuity, a requirement for Canada to provide IAEA access to decommissioned facilities. (See Article 5 a (iii)). Therefore, while the site is released from domestic regulatory control, the facility remains encumbered with IAEA inspections, and this encumbrance needs to be managed by the future site owners, who may have zero nuclear experience.			X	Comment rejected, as a country's safeguards agreement was considered out of scope for this document.
Pakistan	PNRA	7	Appendix-I	1671	Please add **"Equipment Qualification Program"** in the list of documents to be submitted to regulatory body.	Requirement 13 of SSR-2/2 (Rev.1) requires submission of Equipment Qualification Program by operating organization to regulatory body.	X			
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	31	Appendix I	1671	***«Examples of the documents to be submitted to the regulatory authority for a license for location:*** ***- Environmental impact assessment and environmental emission reports;*** ***- Preliminary economic studies related to the required financial investments and estimated costs;*** ***- Site assessment report, including an environmental radiation monitoring report;*** ***- Strategy and plans for public participation in the licensing process;*** ***- Preliminary safety analysis report prior to the issuance of the formal permit to commence construction, which can include the information on the site assessment, design basis, information related to the nuclear and radiation safety, deterministic analysis and the additional probabilistic safety assessment, etc."***	Unavailability of a specific list of documents for each stage of licensing. It is proposed to divide the documents into groups depending on the stage of licensing (location, construction, commissioning, commercial operation, decommissioning) according to the principle - from the minimum required to the sufficient scope at the discretion of the regulatory authority. Column [3] provides an example for the stage of obtaining a license for location. For other stages, the list of the documents shall be placed according to the similar principle.			X	This list is intended to provide examples of the types of documents that the applicant or licensee should submit to the regulatory body. Given that some of these documents will need to be submitted or updated multiple times over the lifetime of the installation and that Member States may require different documents, separating them into each stage would overly complicate the section.
Pakistan	PNRA	8	Appendix-I	1672	Appendix-I describes examples of documents that may be submitted to the regulatory body, during the licensing process of nuclear installations. However, it does not segregate the submissions w.r.t different nuclear installations as defined under the scope of this guide according to graded approach. Therefore, it is suggested to categorize the documents w.r.t type of nuclear installation in tabulated form such as "**Matrix of Applicable Submissions for Different Nuclear Installations**".	• To cover all nuclear installations as defined under the scope of this guide. • To provide guidance for specific submissions in case of isotope production facilities and different fuel cycle facilities etc. • To enhance the illustration of category wise applicability and graded approach [See DPP Section 3(4) and (5)]. • Similar Tables are included in other IAEA guides e.g. SSG-66 (Table I-1), SSG-25 (Table 1).			X	This list is intended to provide examples of the types of documents that the applicant or licensee should submit to the regulatory body. Given that some of these documents will need to be submitted or updated multiple times over the lifetime of the installation, and that there may not be consensus on which documents are required for each type of installation, separating them into a matrix format for each installation would overly complicate the section.

COMMENTS BY REVIEWER							RESOLUTION			
Israel	Nuclear Licensing and Safety Office, IAEC	2	Appendix I par. I.1(a) and par.2.21(c) and par. 3.45(b)	1675	**Justification** of (nuclear) activities, <u>in context</u> of determining whether a practice is overall beneficial outweighing harm to individuals and to society (as defined in the IAEA Safety Glossary), is mentioned in the present revision of DS539 in Appendix I (paragraph I.1(a)) addressing <u>examples</u> of documents to be submitted to the regulatory body and it addresses there the nuclear installation and related activities. In addition to Appendix I, justification is mentioned twice in the body of this revision, in paragraph 2.21 (c) addressing "the safety case in each design area of the licensing process", and in paragraph 3.45 (b) where justification of commissioning tests is addressed. Considering the early intent of the justification requirement (also in ICRP's *System of Radiological Protection*), we suggest considering mentioning the "basic" justification requirement for licensing a nuclear installation as a whole, as a licensing principle - in a somewhat more emphasized mode – possibly at an earlier point in the paragraphs following the sub-title "Basic Licensing Principles for Nuclear Installations" (starting with paragraph 2.6).	Clarity			X	SSG-12 is not intended to provide guidance on assessing whether a practice is overall beneficial, but rather provide guidance on what is needed for the licensing of a nuclear installation, once a State has decided to pursue such an installation.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	40	Appendix I I.1 (o)	1705	Exclude paragraph.	Nuclear security plans, its preparation process and requirements for it are out of scope of this document.			X	Security is not out of scope for SSG-12.
Israel	Nuclear Licensing and Safety Office, IAEC	1	Append. II and Section 7 of May 2022 DS DPP539	1733	<u>General Comment</u>: In the May 2022 DS DPP539, the Overview included an additional Appendix (Appendix III), which was intended to address "Specific Guidance for Licensing of Nuclear Installations other than NPP and SMR (If Any)". Since, probably, it was decided not to include an additional Appendix dedicated to other nuclear installations, we suggest considering adding a short "general remark" or at least an appropriate footnote in Appendix II (where licensing processes for SMR's are addressed) for mentioning additional types of nuclear installations large accelerators and fusion nuclear installations. Fusion reactors are developed in several countries around the world, and their (somewhat relieved) safety aspects and regulation issues are already addressed at the IAEA and other relevant international fora.	Completeness			X	The statement is correct; after the DPP, it was decided that the document would not include guidance on other installations. As Appendix II is related to SMR licensing considerations, it was decided to not note other types of nuclear installations that aren't specifically addressed in the document.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	66	Appendix II	1736	<u>The recommendations in this Safety Guide are generally applicable to small modular reactors. This appendix highlights the potential impact of the new deployment models for small modular reactors on the licensing process and provides additional considerations to ensure that regulatory bodies are able to license different types of nuclear installation and have adequate capabilities and resources for their regulatory activities.</u>	Move para. II.2 in front of the Appendix II, as the text gives the general background and explain the purpose of this appendix.	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	67	II.1	1736	<u>Small modular reactors (SMRs) are NPPs with a power capacity of up to 300 MW(e) or 1000 MWth. Beside electricity production SMR can also be used as plants to generate heat.</u> The characteristics of small modular reactors and their associated deployment models[10] [6], ranging from factory manufacturing and testing to factory construction, and new programmes for maintenance and decommissioning. introduce some differences compared to those of land-based large nuclear power plants.	A definition for "SMR" should be given. We made a suggestion. Remark: If the definition "SMR" is given under the section "Definitions relevant to the licensing on nuclear installations" a hint to Appendix II should be added.			X	definition of SMR is not considered essential to discuss considerations that should be addressed for such designs. The potential characteristics of SMRs are listed in II.2.
Canada	Canadian Nuclear Safety Commission	7	Appendix II	1748	*Licensing of SMRs – the number of stages seems overly more complex for SMRs than actual NPPs (lines 1748-1758). Suggest simplifying and aligning to NPP stages.*	Stages c) and d) are no different to the existing practices of offsite manufactured skids (such as pumps/turbines) that undergo FAT's, and limited (cold) commissioning off site, if any. Stage e) as above. There is no difference between transporting a turbine and transporting an empty reactor vessel, and a microreactor, transporting carrying fuel, is already subject to nuclear material transport regulations. Stages (f) and (g) usually run concurrently, as various systems and mechanically completed and handed over to commissioning. Consideration to be given to stages c to g, and the value of them being broken out as "distinct" phases when this is already happening with non-SMR projects.			X	current wording encompasses all types of SMRs; consolidation was not deemed justified.

COMMENTS BY REVIEWER							RESOLUTION			
France	ASNR	10	Appendix II II.1	1748	Add “**modification of design**” in the bullet list	Modification of design (or modification) is addressed many times in the DS539 for nuclear installations. It is also applicable to SMRs.			X	the suggested item is not a lifetime stage and is not consistent with Section 1.3 (Figure 1).
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	68	Appendix II.1	1748	(a) Siting and site evaluation (in case of transportable SMR different sites may be considered)	Suggestion for incorporation of issues of transportable SMRs			X	current wording encompasses all types of SMRs; level of detail was not deemed justified.
Indonesia	Nuclear Energy Regulatory Agency (Bapeten)	1	Appendix II.1	1748	Change one stage and add one stage, to be: (h) Single-site operation; (i) Multiple-site operation;	The floating nuclear power plant design uses SMR design. One of them, the ACPR50(S) concept, considers using more than one location for the operation stage, as it can provide energy support for the refinery industry. This concept might be adopted in the future by another floating nuclear power plant design.			X	current wording encompasses all types of SMRs; level of detail was not deemed justified.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	69	Appendix II.1	1752	(e) Transport (both to and from facility as well as between different sites in case of transportable SMRs);	Suggestion for incorporation of issues of transportable SMRs			X	current wording encompasses all types of SMRs; level of detail was not deemed justified.
USA	USNRC	26	Appendix II.1	1762	For example, the licensing of such a reactor may include new hold points or regular periodic transportation back to operations after refueling or refurbishment offsite.	Stages that are provided are a good list. However, some may overlap or repeat. The added example shows that these conditions may be present and may need licensing hold points.		Addressed in paragrpah II.2.		
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	70	Appendix II.2	1763	~~The recommendations in this Safety Guide are generally applicable to small modular reactors. This appendix highlights the potential impact of the new deployment models for small modular reactors on the licensing process and provides additional considerations to ensure that regulatory bodies are able to license different types of nuclear installation and have adequate capabilities and resources for their regulatory activities.~~	Move this para in front of the Appendix II. It gives the general background and explain the purpose of the appendixes.	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	71	Appendix II.2	1763	The recommendations in this Safety Guide are ~~generally~~ applicable to all nuclear installations, including small modular reactors.	Clarification.		The recommendations in this Safety Guide are generally applicable to all nuclear installations, including small modular reactors.		It is considered better to maintain 'generally'
Japan	NRA	11	Appendix II.2	1763	The recommendations in this Safety Guide are generally applicable to small modular reactors. This appendix highlights the potential impact of the new deployment models for small modular reactors on the licensing process and provides additional considerations to ensure that regulatory bodies are able to license different types of nuclear installation and have adequate capabilities and resources for their regulatory activities. However, Member States have limited experience in licensing of design, construction, operation, or decommissioning of small module reactors, and are especially encouraged to share with one another the early experiences gained in novel areas.	Move the essence of paragraph II.17 to the top of this appendix II with some modifications of the descriptions, as limited experiences are found in all stage of licensing of SMRs.		captured in II.18		The paragraph on sharing information was more applicable to the section on sharing and leveraging information on SMRs.

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	17	Appendix II.2	1763	The recommendations in this Safety Guide are generally applicable to small modular reactors. This appendix highlights the potential impact of the new deployment models for small modular reactors on the licensing process and provides additional considerations to ensure that regulatory bodies are able to license different types of nuclear installation and have adequate capabilities and resources for their regulatory activities. However, Member States have limited experience in licensing of design, construction, operation, or decommissioning of small module reactors, and are especially encouraged to share with one another the early experiences gained in novel areas.	Move the essence of paragraph II.17 to the top of this appendix II with some modifications of the descriptions, as limited experiences are found in all stage of licensing of SMRs.		II.15 At the time of writing this Safety Guide, States have limited experience of the licensing of siting, construction, operation, and decommissioning of small modular reactors. While some experimental facilities are operational or in various stages of design and construction, broader experience in commissioning, operating, and decommissioning small modular reactors is needed. States are therefore encouraged to share with one another the early experiences gained in novel areas.		The comment was deemed correct, but the wording was changed slightly with respect to the suggestion and it was moved down to be II.15, the beginning of the section on sharing and leveraging information.
Finland	STUK	6	Appendix II, CAPACITY OF THE LICENSEE OF A SMALL MODULAR REACTOR TO FULFIL ITS RESPONSIBILITIES	1769	-	The increased use of contractors and the emergence of new small licensees and start-up vendors may increase the risk that the licensee or some of its important contractors “disappears” e.g. due to business failure. Should this risk be addressed in the licensing?			X	The risk is understood. It is deemed as addressed in the section for reliance on contractors.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	72	II.3	1772	The regulatory body should seek assurances on this licensee’s organizational capability to effectively oversee safety, security, and safeguards considerations at all stages of the lifetime of the small modular reactor	Clarification: Suggestion to add “security, and safeguards” in order to have one person or organization responsible (one contact for the regulator).	X			
Japan	NRA	12	II.5	1784	The regulatory body should assess the ways in which external stakeholders could influence licensees in the conduct of their licensed activities to ensure that the licensee will be able to exercise its responsibility without undue interference from commercial stakeholders. This ~~may~~ include assessing the interfaces between organizations (licensee, neighbouring entities, shareholders) to evaluate how arrangements can impact the licensee.	This practice should be considered to be duty, not to be occasional practice.	X			grammar
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	73	II.6	1790	An application should demonstrate adequate provisions will be implemented to maintain safety, security, and safeguards and identify the responsibilities of both the foregoing licensee and the current applicant.	Clarification to make the message clearer and more precise.			X	The appliacant is defined in the text before, the suggestion makes it less clear.
Japan	NRA	13	II.8	1809	When the licensee is outsourcing activities, the regulatory body should verify that the licensee will maintain: (a) Prime responsibility for safety of the nuclear installation(s); (~~a~~b) Proper and adequate oversight of all activities; (~~b~~c) An informed customer capability [2] for the activities being undertaken; (~~c~~d) Configuration management, which includes personnel access to applicable configuration management documentation; (~~d~~e) Adequate quality management of activities; ~~(e) Prime responsibility for safety of the nuclear installation(s);~~ (f) A commitment to fostering a strong safety culture; (g) Technical knowledge and skills within the licensee organization; (h) Proper interface mechanisms and procedures for any activities that are outsourced to several contractors.	Move bullet (e) to top of the bullets, as it is required that the licensee retains the prime responsibility for safety throughout the lifetime of facilities and the duration of activities, as stated in SF-1 and GSR Part 1 (Rev. 1).	X			

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	74	Appendix II.8	1817	(f) A commitment to fostering a strong safety, security and safeguards culture	Clarification. Security and – depending on individual SMR – safeguards should also be considered.		A commitment to fostering strong safety and security cultures;		safeguards culture is not a global regognized term as safety and security cultures are.
Japan	NRA	14	Appendix II.9	1822	The licensing process should include provisions to ensure that the licensee maintains independence and the ability to perform their obligations.	Please clarify what independence imposed on licensee means.		II.5 The regulatory body should assess the ways in which external stakeholders could influence licensees in the conduct of their licensed activities to ensure that the licensee will be able to perform their obligations and exercise their responsibility without undue interference from commercial stakeholders. This includes assessing the interfaces between organizations (e.g. licensee, neighbouring entities, shareholders) to evaluate how arrangements can impact the licensee.		Independence is not a consensus term, so it was removed. Furthermore, the text is merged with II.5, which was considered a more appropiate place in the guide.
Israel	Nuclear Licensing and Safety Office, IAEC	7	Appendix II Par. II.9 and II.14(f)	1822	Can "**their**" be used - or should it be "**his**" - used as singular in various parts of this draft when referring to **the licensee**?	Editorial			X	their is used as singular, though non-gender specific, not as a plural.
Germany	Federal Ministry for the Environment, Climate Action, Nature	75	Appendix II.10	1827	In some cases, part of the nuclear installation might have an interface with the neighbouring industrial site or population centre and be separated by a single barrier (e.g. a heat exchanger).	Clarification: both cases should be mentioned here.	X			
Japan	NRA	15	Appendix II.10	1827	Requirements for site evaluation are established in SSR-1 [17]. A small modular reactor can be used for purposes other than electricity production, such as heat production for district heating or industry, hydrogen production or desalination. This may involve installing reactors near another industrial site or a population centre. In some cases, part of the nuclear installation might have an interface with the neighbouring industrial site and be separated by a single barrier (e.g. a heat exchanger). In such cases: (a) Deployment of a small modular reactor near an industrial site ~~may~~ need additional planning and coordination to ensure that: (i) There are adequate arrangements for emergency preparedness and response; (ii) Any activities or changes to activities in the adjacent installation, with direct relation to the small modular reactor (e.g. increase in power demand, modification of electrical power supply) or in any other nearby installation, do not negatively impact reactor safety; (iii) Major activities at the industrial site, such as heavy lifting, blasting or excavation do not negatively impact reactor safety, also possible missiles generated in the neighbouring industrial site should be taken into account; (iv) Where systems are shared between the small modular reactor and the adjacent installation, their operation and any change/modification should be closely followed as part of the small modular reactor's operation to maintain the capability to perform their functions under all conditions; (v) Radiological impact to the population and environment is reduced ~~as much as possible~~ to keep the dose as low as reasonably achievable, considering that workers and visitors in adjacent industrial areas will be exposed to radiation equivalent to that of those at the site of nuclear installation.	item (a); Those items described in bullet (a) are obligation of licensee of a small modular reactor near an industrial site, and then suggested to delete "may".			X	"may" is the chosen term here as it is not recognized that this should always be the case.

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	15	Appendix II.10	1827	Requirements for site evaluation are established in SSR-1 [17]. A small modular reactor can be used for purposes other than electricity production, such as heat production for district heating or industry, hydrogen production or desalination. This may involve installing reactors near another industrial site or a population centre. In some cases, part of the nuclear installation might have an interface with the neighbouring industrial site and be separated by a single barrier (e.g. a heat exchanger). In such cases: (a) Deployment of a small modular reactor near an industrial site ~~may~~ need additional planning and coordination to ensure that: (i) There are adequate arrangements for emergency preparedness and response; (ii) Any activities or changes to activities in the adjacent installation, with direct relation to the small modular reactor (e.g. increase in power demand, modification of electrical power supply) or in any other nearby installation, do not negatively impact reactor safety; (iii) Major activities at the industrial site, such as heavy lifting, blasting or excavation do not negatively impact reactor safety, also possible missiles generated in the neighbouring industrial site should be taken into account; (iv) Where systems are shared between the small modular reactor and the adjacent installation, their operation and any change/modification should be closely followed as part of the small modular reactor's operation to maintain the capability to perform their functions under all conditions; (v) Radiological impact to the population and environment is reduced ~~as much as possible~~ to keep the dose as low as reasonably achievable, considering that workers and visitors in adjacent industrial areas will be exposed to radiation equivalent to that of those at the site of nuclear installation.	item (iii); consideration of possible missiles generated in the neighbouring industrial site is to be included.		(2) item (iii) "Major activities at the industrial site, such as heavy lifting, blasting or excavation do not negatively impact reactor safety, for example due to the risk of unintended projectiles originating from the neighbouring industrial site;"		the text is adjusted to note projectiles originating from the neighbouring site.
Japan	NRA	15	Appendix II.10	1827	Requirements for site evaluation are established in SSR-1 [17]. A small modular reactor can be used for purposes other than electricity production, such as heat production for district heating or industry, hydrogen production or desalination. This may involve installing reactors near another industrial site or a population centre. In some cases, part of the nuclear installation might have an interface with the neighbouring industrial site and be separated by a single barrier (e.g. a heat exchanger). In such cases:	item (v); It is necessary to take into consideration that workers and visitors in adjacent areas will be exposed to radiation equivalent to that of those at the nuclear installation.			X	The bullet has been removed as there should be not difference with respect to other nuclear installations, and it was decided that this did not need to be highlighted in Appendix II.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	41	Paragraph II.10, item (a) sub-item (ii)	1839	A production facility is a separate facility which has no relation to safety provision of a nuclear facility	The text does not contain requirements for integration of nuclear and production facilities into a single production complex.			X	The text states that the feedback of the associated system that could affect the safety of the nuclear installation should be accounted for, which is the meaning of this paragraph.
Russian Federation	Rostechnadzor, SEC NRS, State Atomic Energy Corporation «Rosatom»	42	Paragraph II.10, item (a) sub-item (iv)	1845	A system intended to integrate a nuclear facility with a production facility (for example, a heat transfer pipeline system) outside the nuclear facility shall not perform functions related to safety provision of the nuclear facility. A part of the integration system within the nuclear facility shall be attributed to a specific safety class.	The text does not contain requirements for integration of nuclear and production facilities into a single production complex.		Where SSCs important to the safety of the small modular reactor are shared with the adjacent installation, they should be considered in the licensing process as a part of the small modular reactor.		The comment was directed at safety systems, so it was incorporated as an additional bullet. The original bullet remains as written.
Japan	NRA	7,1	Appendix II.10 (e)	1858	II.10 (e) When deploying a small modular reactor near a population centre (e.g. to provide district heating), the licensee is also required to assess the impact of an emergency on the surrounding population and environment. Size, technology~~,~~ and location~~, and possible underground siting~~ of the installation, along with remoteness of the community might affect the impact significantly.	Suggested underground siting to be deleted, as GSR Part 7 does not state anything about underground siting, and no additional statement on underground siting is provided in this draft publication.		(e) When deploying a small modular reactor near a population centre (e.g. to provide district heating), the licensee is also required to assess the impact of an emergency on the surrounding population and environment (see Requirement 5 of SSR-1 [19]). Size, technology, location, and siting characteristics, along with remoteness of the community might significantly affect the impact.		Agree with the comment with minor wording change.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	76	Appendix II.11	1863	Possible approaches, contingent on approval by the relevant regulatory body, to fleet deployment of small modular reactors include:	Clarification: it should be emphasized that the regulatory authority has the final say, if such an approach can be used or not.		II.10 Possible approaches to fleet deployment of small modular reactors, contingent on compatibility with the regulatory framework, include:		agree with comment and modified slightly

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	77	Appendix II.11 (a)	1864	A 'certified design' model, where a reactor design is certified by a regulatory body or jointly by several regulatory bodies. Once a design is certified, licensing efforts then may focus on site-specific aspects and any changes to the certified design. Moreover, the licence should verify the conformity of certified design against the national regulations.	It is essential to underline that it is the responsibility of the competent regulatory body to verify the application of the licence against the valid national regulations and to grant a permission. This role cannot be suppressed based on the provisions of other authorities. The safety cannot be compromises by relying on some general certificates granted by the foreign authority. It is of paramount importance, especially regarding to political changes and influence in different countries. However, the authorities are encouraged sharing experiences with approval of new technologies.		(a) A deployment model, in which a reactor design is approved by a regulatory body, and that design is deployed in multiple locations as a standardized design. Subsequent licensing efforts in that State then may focus on site-specific and organizational aspects.		It is expected that the design has to meet the requirements of each State where is is being deployed; text has been reworded to clarify the intent.
Finland	STUK	3	Appendix II.11(a)	1865	Once a design is certified, licensing efforts then focus on site-specific and organizational aspects and any changes to the certified design.	Organizational aspects should be mentioned. Even if the same licensee is operating the whole fleet, differences e.g. in safety culture may emerge between different facilities of the fleet.		(a) A deployment model, in which a reactor design is approved by a regulatory body, and that design is deployed in multiple locations as a standardized design. Subsequent licensing efforts in that State then may focus on site-specific and organizational aspects.		agree with comment and modified slightly
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	78	Appendix II.11 (b)	1867	For this model the regulatory body ~~should~~ may review the first-of-a-kind reactor at the same level of assessment as the certified design described in II.11(a), and then its efforts ~~will~~ might focus on the differences from one plant to the next for both the design and site-specific aspects	Clarification We suggest a phrasing that emphasizes an optional applications of such a procedure.		For this model, the regulatory body should review the first-of-a-kind reactor at the same level of assessment as the approved design described in (a), and then its efforts may focus on the differences from one plant to the next for both the design, site-specific and organizational aspects.		Leave the first 'should' there, as it is strongly suggested. Agree with changing 'will', but to 'may'
Finland	STUK	4	Appendix II.11(b)	1868	…efforts will focus on the differences from one plant to the next for the design and organizational and site-specific aspects.	Organizational aspects should be mentioned. Even is the same licensee is operating the whole fleet, differences e.g. in safety culture may emerge between different facilities of the fleet.		Subsequent licensing efforts in that State then may focus on site-specific and organizational aspects.		Accepted but reworded slightly in line with a different comment
France	ASNR	11	Appendix II II.11	1871	Add a new bullet point **"(c) A "certified design model" should consider options showing that decommissioning has been considered at the design stage**"	It is not clear how "certified design model" can address provisions for ensuring safe decommissioning. It is proposed to add a sentence to cover this issue.			X	This section is simply listing approaches to deployment.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	79	Appendix II.12	1872	~~When reviewing a licensing application of a reactor that is part of a fleet, the regulatory body could consider focusing their review efforts on the differences from one plant to the next.~~	Please delete due to significant overlap in content with II.11 b.	X			
France	ASNR	12	Appendix II II.13	1877	Add a new article "**II.14. When a vendor/licensee responsible for the deployment of a SMR fleet in several countries take the decision to stop the deployment of the SMR fleet, an information should be made to the regulators concerned by the deployment"**	A notification process should be in place to inform all regulators involved in the deployment of the SMR fleet when the decision is taken to stop the deployment of the fleet. This decision may have an impact of the capability of the vendor for the maintenance and replacement of SSCs of a SMR fleet.			X	Not needed.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	80	Appendix II.14 (b)	1888	A licensing activity that considers multiple reactor modules of essentially the same design at a facility may undergo a single review and safety evaluation by the regulatory body in the case when these reactor modules are licensed at the same time. ~~If the timing of licensing is different, additional considerations may be needed.~~	It is essential that dealing with a new facility or a new concept requires a new, independent authorization process. The safety should not be compromised by omitting any safety relevant aspects. Please delete the last sentence.	X			

COMMENTS BY REVIEWER							RESOLUTION			
Canada	Canadian Nuclear Safety Commission	8	Appendix II.14 (e)	1902	"(e) If an entire reactor module is being replaced, the licensee should demonstrate that the new components and systems are within the licensing basis of the small modular reactor. This may involve off-site assessment of replacement components. Alternatively, the licensee may need to obtain approval from the regulatory authority or authority having jurisdiction or a new licence for the replacement."	A new licence (although stated as a "may") may be punitive if the existing design/procurement program allows for design changes with approvals from the authority. In a case where a replacement reactor component or system is not a "like for like", it may not require a new licence, but rather an evaluation of the design changes (which may already be an existing process through management of change processes.) which includes the regulator to evaluate and approve the proposed design changes. The proposal could result in unwarranted increase in time/cost to go through full licensing process.		(e) If an entire reactor module is being replaced, the licensee should demonstrate that the new components and systems are within the licensing basis of the small modular reactor. This may involve off-site assessment of replacement components. Alternatively, the licensee may need to obtain approval from the regulatory body or a new licence for the replacement.		agree with comment with slight modifications
France	ASNR	14	Appendix II.14 (e)	1902	Add the following sentence "**When an entire reactor module is being replaced, the licensee should update the baseline radiological survey of the plant/site"**	It is assumed that the lifetime of a SMR might be shorter that the lifetime of the plant. In such situation some provisions should be in place to keep the memory of the origin of the contamination/activation coming from successive SMRs being operated in the plant until the permanent shutdown of the plant.			X	There are scenerios being proposed where reactor modules are regularly 'swapped out'. Adding in this requirement may be overly prescriptive for this or other possible scenerios.
USA	USNRC	27	Appendix II.14 (e)	1904	Alternatively, the licensee may need to obtain a new licence for the replacement, as well as meeting decommissioning licensing requirements for the initial license.	Clarifies that license termination requirements are needed if new license is issued.		(f) When the reactor module is no longer being used for its intended purpose, the licensee should inform the regulatory body and ensure any decommissioning licensing requirements are met.		agree with intent of comment and incorporated with slight modifications as a new sub-bullet (f)
France	ASNR	13	Appendix II.14 (d)/(e)	1905	(d) The licensing process should consider the possibility of incrementally bringing reactor modules/units into and out of service as well as the replacement of reactor modules. (e) If an entire reactor module is being replaced, the licensee should demonstrate that the new components and systems are within the licensing basis of the small modular reactor. This may involve off-site assessment of replacement components. Alternatively, the licensee may need to obtain a new licence for the replacement." Add new text: **The licensee should inform the regulatory body before replacing an entire reactor module. When the reactor module is no longer used for its intended purpose, the licensee should inform the regulatory body.**	For consistency with the GSR Part 6 regarding the notification process for permanent shutdown. If it is expected that license for operation may allow the replacement of reactor modules by new ones, dismantling and/or decommissioning may become part of the license for operation. If a new license may need to be obtained for the replacement, the previous authorization should be terminated. At least, a notification of the replacement of an entire reactor module should be made by the licensee to allow the regulator to determine what licensing process is applicable (modification, decommissioning, new license).		(f) When the reactor module is no longer being used for its intended purpose, the licensee should inform the regulatory body and ensure any decommissioning licensing requirements are met.		There are scenerios being proposed where reactor modules are regularly 'swapped out'. Adding in a requirement to notify the regulatory may be overly prescriptive. The 2nd sentence was added as a new sub-bullet (f), as shown.
Japan	NRA	16	Appendix II.14 (h)	1911	Some deployment models for small modular reactors could allow for different reactor types or the addition or replacement of reactor units or reactor modules12 or major components or systems at various times throughout the lifetime of the facility. Additional units/reactor modules may be in close proximity to or sharing the same infrastructure as operating reactor modules (See para 3.9(a)(iii) for additional information on multiple nuclear installations on the same site.). The potential for evolution of design over time could mean differences among the reactor modules installed at a single facility. As such: …… (a) - (g) omitted (h) The licensee should implement an emergency plan for the entire site. When personnel and/or services are shared among multi units or module reactors in a site, ~~The~~ the licensee should ensure that processes are implemented so that those shared personnel or services are available even if all of multi units or module reactors in a site are impacted simultaneously ~~when needed~~ for safety or security or emergency reasons, including external hazards,	Shared personnel or services need to cope with multi units or module reactors in a site simultaneously against any hazardous events that impact all of these multi units or module reactors.		(i) The licensee should implement an emergency plan for the entire site. When personnel and/or services are shared among multiple units or modules in a site, the licensee should ensure that processes are implemented so that sufficient shared personnel or services are available when needed for the most resource-intensive design basis event scenario for the site.		agree with intent of comment and incorporated with slight modifications
USA	USNRC	28	Appendix II.15	1915	Recommend excluding certain types of SMRs (self-contained microreactors) from the scope of this section.	This section is intended to apply to all types of SMRs, including microreactors. However, for certain microreactor designs, e.g., those that are self-contained, the expected radioactive waste and spent fuel management systems may be radically different than other nuclear installations. Some self-contained microreactors are designed with no interface points other than electrical connections. The deployment model assumes that the unit is picked up from the site and taken to an offsite location for refueling or decommissioning. Some of the provisions included in this section, such as on-site radioactive waste management systems, capabilities to manage the waste of a single reactor, system requirements for spent fuel management, facility effluents, and disposal routes for spent fuel and radioactive waste would not apply to a self-contained unit in operation or would apply at a different stage (i.e., once the unit is taken back to an offsite location for refueling or decommissioning).		(b) The facility should have an on-site or off-site radioactive waste management system, if applicable, capable of characterization, pretreatment, treatment, and storage of radioactive waste (solid, liquid, and gaseous) throughout commissioning, operation, and decommissioning. The system should be designed for handling radioactive waste streams from normal operations, anticipated operational occurrences and accident conditions.		The option for waste treatment off site has been included. There may be some other paragraphs that would be less directly applicable to a 'microreactor' as mentioned in this comment. Most items would be applicable in the right context however, and hence will not be specifically exempted. A footnote was added that for some delivery models, this might not be applaicable to the reactor but to the treatment facillity.

COMMENTS BY REVIEWER							RESOLUTION			
USA	USNRC	29	Appendix II.15 (a)	1924	The design of the SMR facility(ies) should provide means and consideration for ease of decommissioning and (i.e. material selection, modularity construction) for minimization of radioactive waste generation (by volume and activity).	Design should consider ease of decommissioning and waste generation.			X	the ease of decommissioning is already mentioned in the main text as a maior design driver for all nuclear installations. It is not so specific for SMRs it has to be stated here.
USA	USNRC	30	Appendix II.15 (f)	1929	The system should be designed for handling radioactive waste streams from normal operations, anticipated operational occurrences, decommissioning, and accident conditions.	Decommissioning may be on-site during refueling and for eventual decommissioning of the unit and area where operated.			X	out of scope for this section, decommissioning should not be included in the middle of a list of operational states (normal operation, AOO, accidents).
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	81	Appendix II.15 (g)	1944	(g) The proximity of SMRs to industrial sites or ~~large~~ population areas should be assessed to ensure safety throughout decommissioning.	It should also be considered that SMR might be close to population centres (e.g. in case of district heating). In this case also safety throughout decommission-ning is essential. In addition, it will be difficult to define “large”.		(f) The safety throughout decommissioning should also be assessed when siting a small modular reactor close to industrial sites or population centres.		text moved to Siting section and slightly modified.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	82	Appendix II.15 (h)	1946	…Storage options and d~~D~~isposal routes for spent fuel and radioactive waste should be identified and feasible within the Member State’s national strategy.	Suggestion to add “Storage options” as these should also be identified and feasible.	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	83	Appendix II.16	1956	However, key areas of novelty in the review process include the modularity of reactor units within the same facility, the proximity to industrial zones or ~~large~~ population areas, and the unique waste streams and spent fuel associated with non-light water SMRs.	It should also be considered that SMR might be close to population centres (e.g. in case of district heating). These areas can also be less populated. It will be difficult if a definition for “large” should be established.	X			this text was moved to II.1 and incorporated into other text based on other Member State comments.
Sweden	Swedish Radiation Safety Authority	24	Appendix II.17	1961	Remove the paragraph in total or move the text to the introduction (chapter 1).	It is a good approach to share new insights, but this paragraph does not fit with the rest.	X			Moved to the end of II.1... The para. does not relate to the radiactive waste and spent fuel management but more in general.
Indonesia	Nuclear Energy Regulatory Agency (Bapeten)	2	Appendix II.18	1967	Adding new cases: (i) In the case of off-site construction, commissioning, and decommissioning conducted in the operating country, the siting process should be performed for each site using the graded approach. (j) Related to the combined license stated in section 3.2, an applicant can apply the combined license for multiple sites.	As the stages of SMR might vary for every stage, the appendix should consider making requirements for this scheme. Furthermore, the combined license might also be possible for the sites' licensing			X	(i) if offsite activities include the introduction of fuel, then the site would need to be licensed as a nuclear installation, per the guidance in the body of the document. There is no need for additional guidance here. (j) a combined license for multiple sites is not envisioned as an acceptable approach, as each site would need to be evaluated individually.
Israel	Nuclear Licensing and Safety Office, IAEC	8	Appendix II.18(d)	1968	We suggest moving the last sentence of paragraph II.18 (d) (explaining that *mechanisms of control…of activities in the absence of a licensee are out of scope for this document*), to the end of the first sentence at the beginning of paragraph II.18, before II.18(a), following “*..possibly prior to the identification of an operating licensee* .	Completeness	X			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	84	Appendix II.18(b)	1974	The regulatory body should review, assess, and inspect licensee provisions for the oversight of activities important to safety, including those performed off the site. These provisions, as well as the regulatory body’s oversight, should ~~follow a graded approach, that is they should~~ be ~~proportionate~~ adequate to the safety significance of the systems being manufactured, assembled, and tested off the site. The regulatory body should apply the same level of practices on review, assessment and inspection to small modular reactor as those of large power reactors, with some consideration of the configuration of reactors.	The requirements have to be fulfilled in an adequate way in relation to the risk profile of the nuclear installation. Avoid compromising safety due strong encouragement of using graded approach.			X	Per GSR Part 1, Rev. 1, graded approach should be applied, as also noted in the body of SSG-12, starting with 2.50.

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	18,1	Appendix II.18(b)	1974	(b) The regulatory body should review, assess, and inspect licensee provisions for the oversight of activities important to safety, including those performed off the site. The regulatory body should apply the same level of practices on review, assessment and inspection to small modular reactor as those of large power reactors, with some consideration of the configuration of reactors. ~~These~~ Some of provisions, as well as the regulatory body's oversight, should follow a graded approach, that is they should be proportionate to ~~the safety significance of~~ potential risks associated with the systems being manufactured, assembled, and tested off the site. ~~The regulatory body should apply the same level of practices on review, assessment and inspection to small modular reactor as those of large power reactors, with some consideration of the configuration of reactors.~~	Item (b); The third sentence is the principled approach for addressing review, assessment and inspection of any nuclear reactors, while the second sentence is exceptional approach. Therefore, the third sentence to be moved before second sentence. Also, application of a graded approach for nuclear reactor should be based on possible risk expected to systems concerned.		(b) The regulatory body should review, assess, and inspect licensee provisions for the oversight of activities important to safety, including those performed off the site. These provisions, as well as the regulatory body's oversight, should follow a graded approach that is proportionate to the safety significance of the systems being manufactured, assembled, and tested off the site. This may result in the application of the same level of review, assessment and inspection of a small modular reactor as for large power reactors.		some of the comment was retained, with modifications to the text.
Japan	NRA	18,2	Appendix II.18(d)	1974	(d) The licensee should maintain thorough and traceable documentation of inspections, tests, analyses, and acceptance criteria of activities important to safety, to demonstrate that these activities meet the expectations from the safety case. This may need to be ensured by the vendor or the manufacturer, as these activities could be performed in the absence of a licensee. The specific mechanisms of control of the manufacturing and construction activities in the absence of a licensee ~~are out of scope for this document~~ should be established by the vendor or the manufacturer concerned for future transfer to future user (i.e. licensee) of relevant system with related documents.	item (d); The specific mechanisms of control of the manufacturing and construction activities in the absence of a licensee would be responsibility of relevant vendor or manufacturer, who will transfer the system concerned to a future licensee.		(d) The licensee should maintain thorough and traceable documentation of inspections, tests, analyses, and acceptance criteria of activities important to safety, to demonstrate that these activities meet the expectations from the safety case. This may need to be ensured by the vendor or the manufacturer, as these activities could be performed in the absence of a licensee.		
Japan	NRA	18,3	Appendix II.18(f)	1974	~~(f) The licensing process for transportable nuclear power plants should ensure there are adequate provisions for testing before and after transport of a reactor module to the deployment site.~~	item (f); the design requirement itself for transportable nuclear power plants is not yet established, and then suggested to be deleted at this time. Any recommendation on licensing of transportable nuclear power plants should be added after design requirements are established.			X	text changed to (f) The licensing process should ensure there are adequate provisions for testing before and after transport of a reactor module to the deployment site, if applicable. Bullet was not removed, as consideration of transportation is needed.
Japan	NRA	18,4	Appendix II.18(h)	1974	(h) The regulatory body should ensure that under the proposed decommissioning strategy, ~~there is~~ licensee or operating organization secures sufficient funding (accrued during the operation of the SMR facility) to complete the decommissioning project and for the site to be released. Unrestricted release of sites from regulatory control should be the primary objective.	Item (h); it is responsibility of licensee or operating organization to secure sufficient funding for decommissioning and dismantlement of nuclear installations and in this context, responsibility of regulatory body is to confirm that licensee or operating organization has secured funding.		(h) The regulatory body should verify that under the proposed decommissioning strategy, the licensee ensures there is sufficient funding to complete the decommissioning project and for the site to be released. Immediate decommissioning and unrestricted release of sites from regulatory control should be the primary objective.		minor changes to the text
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	85	Appendix II.18 (c)	1981	The regulatory body should be able to assess the way safety related activities are conducted, including those performed off the site. This may be achieved by direct oversight of manufacturing sites through qualification, certification, or licensing of the off-site facility or activity~~, or review of the same carried out by a regulatory body in another State~~. This may also be supported ~~achieved~~ through the oversight of the licensee's management system of its supply chain.	It is the responsibility of the competent regulatory body to verify the application of the licence against the valid national regulations and to grant a permission. This role cannot be suppressed based on the provisions of other authorities. The safety cannot be compromises by relying on some general certificates granted by the foreign authority. It is of paramount importance, especially regarding to political changes and influence in different countries. However, the authorities are encouraged sharing experiences with approval of new technologies.		(c) The regulatory body should be able to assess the way that safety related activities are conducted, including those performed off the site. This may be achieved or supported by direct oversight of manufacturing sites through qualification, certification, or licensing of the off-site facility or activity, or by leveraging the review of the relevant activities performed by the regulatory body of the State in which the activities are undertaken. The assessment may also be achieved or supported through the oversight of the licensee's management system of its supply chain.		Collaboration with other regulatory bodies and leveraging their oversight information is kept as an alternative means of achieving the necessary assessment activities.
USA	USNRC	31	Appendix II.18 (e)	1995	Add the following sentence to item (e): "For deployment models where fuel is loaded to the reactor module off-site, the assessment should include safety considerations such as criticality events during transport."	Clarification to highlight the safety relevance of a fueled reactor during transportation.		For deployment models where fuel is loaded to the reactor module off the -site, the assessment should include safety considerations such as the potential for and consequences of criticality events during transport.		edit incorporated with slight modifications

COMMENTS BY REVIEWER							RESOLUTION			
France	ASNR	15	Appendix II.18 (g)	1999	The sentence “the regulatory body should ensure that the licensee provides sufficient information in the license application to ensure that the facility can be safely decommissioned”, should be modified by: “**the licensee should prepare a decommissioning plan and should maintain it throughout the lifetime of the SMR to show that decommissioning can be performed safely**”.	For consistency with GSR Part 6 (Requirement 10: planning for decommissioning). It’s not the regulator to be responsible for ensuring that decommissioning can be performed safely but it’s the responsibility of the licensee.		(g) The regulatory body should ensure that the licensee provides sufficient information in the decommissioning plan that is to be maintained throughout the lifetime of the small modular reactor, to be submitted with the licence application to ensure that the facility can be safely decommissioned (e.g. information on material selection to reduce neutron activation, the generation of complex radioactive waste during operation, the use of a modular design to enable use of well-established dismantling technologies).		The essence of the comment is reflected in amended text.
Israel	Nuclear Licensing and Safety Office, IAEC	9	Appendix II.18(h)	2004	**Ensuring the existence of sufficient funding to complete the decommissioning** project and for the site to be released, can be achieved by the regulatory body in additional models/scenarios, not necessarily based on accruing it during the operation of the operation of the SMR facility.	Completeness			X	The idea of the comment is included. the text is already modified based on another comment.
France	ASNR	16	Appendix II.18 (h)	2004	(h) The regulatory body should ensure that under the proposed decommissioning strategy, there is sufficient funding (accrued during the operation of the SMR facility) to complete the decommissioning project and for the site to be released. Unrestricted release of sites from regulatory control should be the primary objective Add the following sentence: “**The preferred decommissioning strategy shall be immediate dismantling.**”	For consistency with GSR Part 6 (requirement 8, § 5.1, p.10) regarding the preferred decommissioning strategy.		(h) The regulatory body should verify that under the proposed decommissioning strategy, the licensee ensures there is sufficient funding to complete the decommissioning project and for the site to be released. Immediate decommissioning and unrestricted release of sites from regulatory control should be the primary objective.		The essence of the comment is reflected in amended text.
France	ASNR	17	Appendix II.19	2010	Add the following sentence before “As such” (line 2016): “**It can be assumed that one SMR module being operated for a given period could be moved from one country to another one to be operated for another period of time**”.	In this section, it is assumed that design changes information should be shared and leveraged. It is not considered that one SMR module could be moved to one site to another one or from one country to another one.			X	It seems a very unlikely situation and the transport of "used" reactors between countries is currently out of scope of the publication
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	86	Appendix II.19	2010	As small modular reactors are expected to deploy more standardized designs worldwide, collaboration amongst regulatory bodies in different States may be necessary encouraged and regulatory bodies may choose to leverage work that has already been performed in another State. Leveraging of documents should not reduce in any way the possible oversight of the regulatory body or compromise any safety relevant aspects. In addition, with reactor lifetimes projected to be many decades, it can be assumed that design changes will be needed over the reactor lifetime to cover, for example, improvements or changes in design due to operating experience, as well as changes needed to support obsolescence of components (e.g. instrumentation and controls). As such, States need to ensure they properly understand and document how leveraged information was used in their decision making process, independently verify fulfillment of all locally applicable requirements of respective regulations, and also ensure that their documentation is done with enough detail that regulatory oversight capability can be maintained over the lifetime of the facility. The final decision if documents can be leveraged lies with the local regulatory body, who takes responsibility of their regulatory decisions.	It is the responsibility of the competent regulatory body to verify the application of the licence against the valid national regulations and to grant a permission. This role cannot be suppressed based on the provisions of other authorities. The safety cannot be compromises by relying on some general certificates granted by the foreign authority. It is of paramount importance, especially regarding to political changes and influence in different countries. Moreover, dealing with safety relevant changes requires a new, independent authorisation process. The safety should not be compromised by omitting any safety relevant aspects. However, the authorities are encouraged sharing experiences on approval of new technologies		II.16 As small modular reactors are expected to deploy more standardized designs worldwide, collaboration among regulatory bodies in different States may be beneficial, and regulatory bodies may choose to leverage work that has already been performed by the regulatory body in another State. Leveraging of another regulatory body’s work should not relieve the regulatory body from its oversight responsibilities. II.17 When considering the use of information from other regulatory bodies, the regulatory body receiving information should ensure that it: (a) Has full access to all necessary documents, including the design details and background information (to the full extent allowed by applicable laws) to make regulatory decisions and should validate the information received; (b) Understands the information (i.e. maintains an informed customer capability [2]); (c) Understands what the information was previously assessed against and what it will be subsequently assessed against (i.e. what regulations, policies, and safety standards the original assessment was performed against); (d) Independently verifies fulfilment of their applicable regulatory requirements; (e) Takes responsibility for its own regulatory decisions. II.18 When leveraging information		Encouragement for leveraging information is not included in the text. Additionally, proposed text at the end of the sentence is addressed in the next paragraph. Text is modified to reflect remaining comments on the paragraph. The last addition is covered by a previous sentence "regulatory bodies may choose to leverage."

COMMENTS BY REVIEWER							RESOLUTION			
Japan	NRA	19	Appendix II.19	2010	As small modular reactors are expected to deploy more standardized designs worldwide, collaboration amongst regulatory bodies in different States may be necessary and regulatory bodies may choose to leverage work that has already been performed in another State. ~~In addition, with reactor lifetimes projected to be many decades, it can be assumed that design changes will be needed over the reactor lifetime to cover, for example, improvements or changes in design due to operating experience, as well as changes needed to support obsolescence of components (e.g. instrumentation and controls). As such,~~ States need to ensure they properly understand and document how leveraged information was used in their decision making process, and also ensure that their documentation is done with enough detail that regulatory oversight capability can be maintained over the lifetime of the facility. In this context, the State should inform this experience of leverage to another States for their subsequent leverage through the international network.	Suggested to be deleted, as this practice is not specific to SMR, but can be applied to traditional NPPs. The key message of this paragraph is collaboration amongst regulatory bodies in different States, and this paragraph should focus collaboration and leverage of experience. Furthermore, the result or experience of this leverage should be in turn informed to another States in their subsequent leverage. In addition, as this paragraph does not include any recommendation, as Safety Guide, added message is written with “should” statement.		II.18 When leveraging information, regulatory bodies should ensure they properly document how leveraged information was used in their decision making process and ensure that this documentation contains enough detail to ensure that regulatory oversight capability can be maintained over the lifetime of the facility. In this context, regulatory bodies are also encouraged to share their experience leveraging previous work with other regulatory bodies, when applicable.		Deletion is not implemented as it was considered as an important issue regarding the leveraging information from other regulatory authorities. Addition is added to the text with amendment
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	87	Appendix II.20	2020	When leveraging information from other regulatory bodies, the regulatory body receiving information should have full access to all necessary documents, including the design details and background information, to make regulatory decisions and should validate the information received	The regulatory body needs access to all necessary documents.	X			incorporated into current II.17(a)
Sweden	Swedish Radiation Safety Authority	25	Appendix II.20	2020	"To leverage information from other regulatory bodies, the regulatory body receiving information need to have…"	The regulatory body receiving information is not in the position to pose requirements on the other regulatory body.			X	If the regulatory body does not have full access to the information being leveraged, then it may not be best to leverage the prior work.
USA	USNRC	32	Appendix II.20	2021	Revise as follows: "...information should have full access to the design details and background information (to the maximum extent allowed by applicable law) to make…"	Clarification to indicate that "full access" may not be possible when restricted by applicable laws (e.g., intellectual property, national security).	X			incorporated into current II.17(a)

COMMENTS BY REVIEWER							RESOLUTION			
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	88	Appendix II.21	2023	~~When considering the use of information from other regulatory bodies, the regulatory body receiving information should ensure that it:~~ ~~(a) Understands the information (i.e., maintains an informed customer capability [2]);~~ ~~(b) Understands what the information was previously assessed against and what it will be subsequently assessed against (i.e. what regulations, policies, and safety standards the original assessment was performed against);~~ ~~(c) Takes responsibility for its own regulatory decisions.~~	Please delete due to significant content overlap with II.19.			X	Content of section was retained, but section was re-ordered for better structure.
Austria	BMLUK	1	Appendix II.21	2029	(c) has full access to the complete safety case documentation and supporting documents and has the capability to re-affirm or challenge in spot checks selected safety evaluations by own calculations. (d) Takes responsibility for its own regulatory decisions.	II.21 provides recommendations on what to ensure when a regulatory body considering the use of information from other regulatory bodies in context of SMR certification and licensing. The proposal provides further guidance on type and substance of required information and the necessary capability and professional expertise of the regulatory body receiving information for qualified decision making. The current "(c) Takes responsibility for its own regulatory decisions." should be considered as new (d) without change in content.		II.17 When considering the use of information from other regulatory bodies, the regulatory body receiving information should ensure that it: (a) Has full access to all necessary documents, including the design details and background information (to the full extent allowed by applicable laws) to make regulatory decisions and should validate the information received; (b) Understands the information (i.e. maintains an informed customer capability [2]); (c) Understands what the information was previously assessed against and what it will be subsequently assessed against (i.e. what regulations, policies, and safety standards the original assessment was performed against); (d) Independently verifies fulfilment of their applicable regulatory requirements; (e) Takes responsibility for its own regulatory decisions.		Implemented slightly differently in combination with other comments. Now part of II.17.
Slovak Republic	JAVYS, a.s.	1	General	General	The document brings together all aspects of licensing nuclear installations for their siting, design, construction, commissioning, operation, decommissioning and, at the end, release from regulatory control. At least for formal reasons, it seems useful that the document also adequately addresses the process of withdrawal of all mentioned types of licenses by the regulatory body: on what basis this could happen and how it should proceed.	This comment is not fundamental in nature; it is aimed only at improving the text.			X	revoking a license is the term that is used in the guide and should be sufficient.
Pakistan	PNRA	1	Table of Contents (Section 3)	Table of Contents	Please modify the 6th sub-heading as below: ~~Licensing~~ **Approval** of the operation of a nuclear installation	• To make it consistent with other licensing steps given in this guide such as 'Approval of the construction of a nuclear installation' etc.		Authorization of the operation of a nuclear installation		changed to "authorization" based on comments.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	3	Contents	Table of Contents	GENERAL RECOMMENDATIONS ON THE LICENSING PROCESS FOR NUCLEAR INSTALLATIONS Definitions ~~relevant to the licensing of nuclear installations~~ […] Obligations, roles and responsibilities of the regulatory body ~~for licensing of nuclear installations~~ […]	There is no need to repeat this phrase, since the title of the heading already addresses the "licensing of nuclear installations" (see also other subheadings). This applies to all the contents.			X	While we agree with the intent of the comment, the phrase was retained given that readers may use only portions of the document, and given the increasing use of AI in accessing and researching these documents.
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	1	General 1		Please ensure that the wording and format of the paragraphs comply with the specifications of the IAEA Safety Guide, namely: some of the paras are not formulated as recommendations, as "should".				X	Via discussions with the IAEA Safety Standards section, it was determined that it was accceptable to not have all paragraphs containing "should".
Germany	Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN)	2	General 2		It looks like the term "site evaluation" needs harmonization. Currently it is being used in two different meanings: 1) as a step in the lifetime of the facility and 2) as a process to evaluate the site. In this table we marked affected wordings, made explanations as well as suggestions for improvement. We would like to ask IAEA to clarify this matter on the overarching level.		X			Changes made to fix references to site evaluation