Safety of Nuclear Power Plants - Operation (DS-413)								
	COMMENTS BY REVIEWER				***RESOLUTION***			
	Country	***Para/Line No.***	***Proposed new text***	***Reason***	***Accepted***	***Accepted, but modified as follows***	***Rejected***	***Reason for modification/rejection***
1.	**UK** **BE**	General		It does not seem logical to relegate Periodic Safety Review (PSA) to a subsection in Section 6 when the scope of PSA covers the subject matter of the other main Sections in the document. It should be a section in its own right	***Accepted, the best place for the*** Periodic Safety Review (PSA) is the Section 4 MANAGEMENT OF OPERATIONAL SAFETY			
2.	**FRA**		Once the acronym SSC or MST&I have been defined, don't use the full words anymore		***Accepted***			
3.	**FIN**	Title of chapter and order of contents	Reformulate: 9. ~~LONG TERM OPERATION,~~ EQUIPMENT QUALIFICATION, ~~AND~~ AGEING MANAGEMENT AND LONG TERM OPERATION	Chronological order.	***Accepted***			
4.	**FIN**	Title "Radiation protection and radioactive waste management"	Reformulate: The title should be divided into two different titles "Radiation protection" and "Radioactive Waste Management". Paras 4.47 and 4.48 are belonging under the title "Radioactive Waste Management" and all other ones under the title "Radiation protection".	There are no need to equate Radiation protection with Radioactive Waste Management	***Accepted***			
5.	**IND**	Heading	INTERFACES WITH OPERATIONS. MAINTENANCE, CONSTRUCTIONS AND	"Constructions" is appropriate word here.	***Accepted***			

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
			DESIGN ENGINEERING (NPCIL)		
6.	**NETH**	Contents pg.2 and end of the standard	Add: Advisory Bodies	Usual mentioning of adv. bodies a good practice for transparency	***Accepted, The content is prescribed by the IAEA format for the Standards***
7.	**UK**	Para 1.1, last line	Replace current text with "…is achieved through effective management and control of operational activities."	This wording is simpler to understand.	***Accepted***
8.		Par 1.2	Delete entire paragraph.	There is an element of duplication with Para 1.3 and some rewording of Part 1.3 can adequately cover the material (see Comment No. 4)	***Accepted***
9.	**FIN**	Para 1.1 lines 1 and 2	Change: ….by means of proper site selection ~~and evaluation~~, design, construction and commissioning and their evaluations followed…	Evaluation should cover all stages of life cycles.	***Accepted***
10.	**FRA**	1.2	Delete 1.2	Superfluous because covered by 1.3	***Accepted***
11.	**UK HSE**	Para 1.3	Insert the following at the end of Para 1.3 "This update also reflects feedback on use of the standards from Member States and by the Agency's safety related activities."		***Accepted***
12.		Para 1.3, 4th line	Reword as follows from "…industry, to introduce new requirements that were previously contained as recommendations in the Safety Guides for……."		***Accepted***
13.	**FRA**	1.4/1	Replace "6, 7, 8 and 9" by "6 to 9"	Alternative wording	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
14.		1.5/2	Delete "used in nuclear safety and radiation protection"	Superfluous	Accepted
15.	**NETH**	1.5 line 3	IAEA Safety Glossary **[ref. nr. X]**	Addition of reference document to be included in list of references	Accepted
16.	**FIN**	Para 2.1 line 2	Add: …installations, <u>may</u> usually have associated….	A softer wording is needed.	Accepted
17.	**FRA**	2.2/3	Replace "6, 7, 8 and 9" by "6 to 9"	Alternative wording	Accepted
18.	**FIN**	Para 2.2 line 5	Delete: ~~They are interdependent.~~	The sentence is not needed.	Accepted
19.	**NETH**	3.1 2,3,6,8,9	integrates safety, health, **environment**, security ……. **economy** related ….lessons learned **from** experience ……potential impact **on** the safety, health, **environment** …..and **economy related** elements ……	Text improvements	Accepted
20.	**SWISS**	3.1./6	- lessons learned - what is meant by "for experience"?		Accepted
21.	**FRA**	3.1/6	lesson learned <u>from</u> experience	Typo	Accepted
22.	**SWISS**	3.1/9	... methods of the management system		Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
23.	**FIN**	Para 3.1 line 9	Change: …each product ~~or~~ and activity.	Both ones should be covered.	Accepted
24.	**NETH**	3.2, 3rd line	……. plant management, **in which case** the necessary resources and support shall be provided [1]	Better text	Accepted
25.		3.3	replacement of ; by ,	editing	Accepted
26.	**FIN**	Para 3.3 line 1 to 3	Reformulate: Functional responsibilities~~,~~, levels of delegated authority~~,~~ and lines of internal and external communication for the safe operation of plants in all operational states~~,~~ shall be….	Use of semi-colon makes more difficult to understand the requirement.	Accepted
27.	**HUN**	3.4(1)	organizational learning and for safety culture	Confusing sentence	Accepted
28.	**FIN**	Para 3.4 bullet (1)	Reformulate: …. management objectives~~,~~ and establishing policy for nuclear safety, organizational learning~~,~~ and for safety culture.	Clarification of sentence	Accepted
29.	**NETH**	3.4 (3)	operating **functions** which include …… in all operational states, including outages, **and in** accidents	consistency with 3.4(4) and more precise in accordance with glossary	Accepted
30.	**SWISS**	3.4./5	**for** organizational learning		Accepted
31.		3.4(5), 3rd line	……. to verify **compliance with** the stipulated objectives for safe operation of the plant, **to reveal deviations , deficiences and equipment failures and to provide information for the purpose of**	More complete text	Accepted

			COMMENTS BY REVIEWER		RESOLUTION
			taking timely corrective action and making improvements		
32.	**HUN**	3.4(5)	The purpose of monitoring is to verify that the stipulated objectives for safe operation ofthe plant are met	editorial	Accepted
33.	**FRA**	3.5/3	requirements.-	Typo	Accepted
34.	**HUN**	3.6	Shall be submitted to the regular for prior approval	editorial	Accepted
35.	**FIN**	Para 3.6 line 3	Add: …shall be made available to the staff and to the regulatory… The structure of the operating organization shall be defined so that all safety critical roles are identified and described as an operational baseline.	It is the first prerequisite to make it available to the staff. The minimum for the organization for safe operation needs to be identified and described to justify the organizational structure	Accepted
36.	**NETH**	3.6 last line	**for** prior approval	Typing error	Accepted
37.	**IND**	3.6/7	Replace for to for (AERB)	Editorial	Accepted
38.	**FRA**	3.6/3	Delete "for review"	Superfluous. It's up to the regulator to decide what to do with this information….	Accepted
39.	**UK HSE**	Para 3.6 4th sentence	Replace "fro" with "for".	Typing error	Accepted
40.	**FRA**	3.6/7	Replace "regulator" by "regulatory body"	Consistency with IAEA glossary	Accepted
41.	**IND**	3.6/7	**Replace" fro" to "for"**	editorial	Accepted
42.		Para 3.9	Divided into 2 sections to separate the requirement:	Different content than the other things in the section.	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
			Managers shall promote an attitude of safety consciousness of plant staff.		
43.	**NETH**	3.11 last line	……. in the operating **personnel**	To avoid using undefined term	Accepted
44.	**FRA**	3.12/2	Replace "staff" by "personnel"	To encompass both staff and managers.	Accepted
45.	**IND**	3.13/2	Shall be paid for minimizing (NPCIL)	Grammatical correction	Accepted
46.	**IND**	3.15/4	**...**given to ensure that... (NPCIL)	Grammatical correction	Accepted
47.	**FIN**	Para 3.15 line 4 before the last sentence	Add: Written instructions shall be preferred and oral (verbal) instructions avoided. If oral (verbal) instructions are used, a~~A~~ttention shall be ….	Self explanatory	Accepted
48.	**NETH**	3.16 / 1st	**Working environment aspects which influence human factors** and the effectiveness and fitness for duty….	Clearer formulation	Accepted
49.	**HUN**	3.16.1	3.16 Human performance shaping factors		Accepted "human performance factors"
50.	**UK HSE**	Para 3.18, 2nd sentence		It is not activities that require formal organisation, it is persons performing certain duties that are often authorised, eg reactor operators.	Accepted
51.	**IND**	3.19/2	... capable to safe^... (NPCIL)	Grammatical correction	Accepted
52.	**CAN**	Para 3.19	End of the sentence should be corrected to read "…are capable of performing their functions."	editorial	Accepted (see also 90)
53.		3.19 / last	…… of safely **performing** their	Wording	

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
54.	**UK HSE**	Para 3.21, 1st line	Insert the words "training of" before "personnel"	Clearer English	Accepted
55.		Para 3.24	Replace with a slightly modified version of Para 3.8 (NS-R-2): "Performance based programmes for initial and continuing training shall be developed and put in place for each major group of personnel. The content of each programme *shall* be based on a systematic approach. Training programmes shall promote attitudes which help to ensure that safety issues receive the attention that they warrant."	This is slightly modified version of Para 3.8 NS-R-2. The English is more elegant as Para 3.8 had gone through the Agency's editing department. For example the addition of the word "personnel" and removal of "help to" in the last sentence do not improve the meaning of the sentence.	Accepted
56.		3.30/3™	Replace ' operators' by 'operating oiganization'.	Interface should be between organizations.	Accepted
57.	**UK HSE**	Para 3.30, end of 1st sentence	Replace "license" with "licence"	Incorrect spelling of "licence". License is a verb, but the word is not used as a verb in this sentence.	Accepted
58.	**FRA**	3.21/3	Add "and promote safety culture" after "operation".	To emphasis on safety culture and be consistent with 3.24	Accepted
59.	**FIN**	Para 3.23 line 2	Delete: ~~Line m~~Managers shall participate….	It depends on organization model whether they have line managers.	Accepted
60.		3.24	Performance based programmes for initial and continuing training shall be developed and put in place for each major group of personnel (including if necessary contracted	The licensee is responsible for ensuring that contracted personnel or contractors in safety critical jobs are competent.	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
			personnel)		
61.	**FRA**	3.25/3	Add "and operating policy" after "conditions"	The plant may not change but in-house rules may….	Accepted
62.		3.30/1	Replace "surveillance" by "oversight"	Alternative wording	Accepted
63.	**FIN**	Para 3.30 lines 2 to 3	Delete: ~~Interfaces between the regulatory body and the operators shall be clearly defined and carried out on the basis of the operating license.~~	It is better to delete this requirement. Operating license is not a document on the basis of which interfaces shall carry out.	Accepted to remove "on the basis of operating license"
64.	**FRA**	3.30/3	Replace "operators" by "operating organization"	Consistency	Accepted
65.		3.30/3	Delete "and carried out on the basis of the operating license"	Superfluous. Furthermore, the operating license is not the only pertinent document. The law and regulations are also to be taken into account.	Accepted
66.	**NETH**	3.30 / 3rd	Operating organisation to replace operators	Better term	Accepted
67.	**UK HSE**	Para 3.31.	Insert a comma after "relationship"		Accepted
68.		Para 3.32	Revert to Para 2.16 (NS-R-2)	More correct English	Accepted
69.	UK HSE	Para 3.34, 1st sentence	Reword as follows: "The operating organisation shall provide all necessary assistance to the regulatory body to enable it to perform its duties, including unhindered access to plant and documentation."	Improved English makes the sentence easier to read.	Accepted to modify the sentence still keeping in "including performing specific analyses, tests and inspections"
70.	**NETH**	3.34 last sentence	Delete the sentence.	Unnecessary requirement	Accepted
71.	**IND**	3.34/3rd -	Tlëlelê the sentence 'All	Out of context	Accepted

		COMMENTS BY REVIEWER			RESOLUTION
		4th	demands exceeding these regulations shall be explained and justified'.		
72.	**FRA**	3.34/4	Delete "All demands exceeding these regulations shall be explained and justified."	Superfluous	Accepted
73.	**FIN**	Chapter "Interface with external support organizations" and paras 3.35 and 3.36	Change order of chapters: This chapter should be present before the chapter "Interface with the regulatory body"	Chronological order.	Accepted
74.	**NETH**	3.35, 1st sentence	The management system of the operating organisation shall provide arrangements to ensure safety in activities performed by external support organisations	Clearer formulation	Accepted
75.	**ENISS**	3.36	The operating organization shall make sure that a system exists for ensuring that the personnel of external supporting organizations, who perform activities on safety related structures, systems or components, are qualified to perform their assigned tasks	The proposed text gives better responsibility to the contractors, while keeping the ultimate responsibility with the operating organization.	Accepted to modify text
76.	**FRA**	3.36/1	After "shall", add "supervise jobs performed by the supporting organization. As	Supervision is a key factor for contracted jobs. Ensuring qualified staff is doing the job is not the sole	Accepted to consider where to put the supervision aspects (see also comment of NETH., below on this matter)

		COMMENTS BY REVIEWER			RESOLUTION
			part of this supervision, the operating organization shall"	aspect of supervision.	
77.	NETH	3.36, 2nd	……. who perform activities on structures, systems and components **important to safety …..**	Wording, definition	Accepted
78.	FRA	3.36/3	Delete "whole"	Superfluous	Accepted
79.	NETH	3.36, 4th	additional sentence: Contractors' staff shall be properly controlled and supervised by plant staff.	Also after commencement of activity proper control	Accepted
80.	FRA	4.1/1	Delete "special"	Superfluous	Accepted
81.	FIN	Para 4.1 line 3	Delete: ---the utmost priority ~~at the plant~~, overriding …	Unnecessary wording.	Accepted
82.	FRA	4.2/4	operating organization expectations.		Accepted
83.	ENISS	4.2 (4th line)	operating organization expectations.		
84.	NETH	4.3, 2nd	Delete 'such'	clearer	Accepted
85.	SWISS	4.3/2	... in all operational areas. These expectations should be in compliance with the written procedures. Safety...	Remove "such"; it is not clear to what this word refers to. The proposed new sentence may serve to prevent conflicts between management expectations and procedures	Accepted
86.	HUN	4.3.2	...in all operational areas		Accepted
87.	CAN	Para 4.5	Suggest a cross-reference to Para 6.58 and 6.59 in last	Clarify that context of requirement for periodic safety review is the	Accepted

			COMMENTS BY REVIEWER		RESOLUTION
			sentence which refers to a periodic safety assessment	PSR.	
88.	NETH	4.5, 1st	…… perform periodic operational safety assessments	plural	Accepted
89.	NETH	4.6, 1st	…… shall **ensure** long term access	wording	Accepted
90.	FIN	Para 4.6 lines 1 to 2	Delete: ~~This will help to ensure the reliability of future safety analyses.~~	Unnecessary wording.	Accepted
91.	FRA	4.6/2	Delete "This will help to ensure the reliability of future safety analyses."	Superfluous (explanatory note, not a requirement)	Accepted
92.		4.7/2 & 3	Replace "operators" by "personnel"	To avoid confusion with control room operators.	Accepted
93.		4.7/5	Add "if appropriate" after "reactor"	Power reduction may not always be an appropriate action to reduce risk…	Accepted
94.	NETH	4.8, 2nd	….. reactor in the **interest** of	singular	Accepted
95.		4.10, 2nd and 3rd	……. to manage **that** the risks to health and safety **are** as low …..	wording	Accepted rewording. Instead "manage" insert "maintain".
96.	UK HSE	Para 4.8 3rd & 4th sentences	Suggest that these sentences are moved to Para 4.9.	The last two sentences of Para 4.8 discuss incident investigation. They seem out of place in Para 4.8 which is mainly about reactor shut-down and restart	Accepted
97.	FRA	4.9	Following an <u>abnormal</u> event, the operating organization …	For clarity.	Accepted
98.	FRA	4.11/3	Delete "respective"	Superfluous	Accepted
99.		4.11/5	At the end, add " and plant	Licence conditions have to	Accepted

			COMMENTS BY REVIEWER		RESOLUTION
			licence condition"	complied with.	
100.	**CAN**	4.13	In the third line, change "use" to "used".	Editorial. Verb tense.	Accepted
101.	**FRA**	4.13/2	Add "equipment design or maintenance and" before "human factors"	Human factors are important but equipment also….	Accepted
102.	**SWISS**	4.13./2	...relating to human and organizational factors	Risk that the main focus is put on human failure, instead of on organizational and management related causes.	Accepted
103.	**HUN**	4.13.2	...including those which are related to human and organisational factors.		Accepted
104.		4.13.3	...programmes and shall be used to up-date...		Accepted
105.	**CAN**	Para 4.14	Second sentence should be corrected to "The results…and used to up-date procedures and instructions."	editorial	Accepted
106.	**FRA**	4.19/2	Before "operational limits", add "regulations, licence conditions or"	Everything to be complied with is not n the OLCs.	Accepted
107.		4.19/2	After "(OLC", add ", see section 6"	Clarification	Accepted
108.	**SWISS**	4.22/1-2	Emergency preparedness shall cover the capability of maintaining protection and safety by managing abnormal scenarios in order to prevent accidents; mitigating the consequences if accidents occur; ...	Phrase "maintaining safety ... by managing accidents" is logical questionable: ifan accident occurs, maintaining safety is failed.	Accepted. The first sentence will be rephrased to avoid confusion with safety.

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
109.	**FRA**	4.22/2	Replace "by managing accident, mitigating their consequences" by "in case of accident conditions, mitigating the accident consequences".	In IAEA glossary, accident management covers only BDBA. Emergency preparedness shall cover all accident conditions	Accepted. First sentence should be rephrased to comply with the IAEA Glossary and the other IAEA publications related to the emergency preparedness. For discussion
110.	**FIN**	Para 4.25	...This shall include: arrangements for prompt recognition of emergencies; timely notification and alerting of response personnel; **situation assessment on the progress of the accident, its consequences and measures needed;** provision of the necessary information...		Accepted
111.	**FIN**	Para 4.29 line 1	Add: …. shall be designed and conducted to evaluate…	Design (planning) is not sufficient way to evaluate.	Accepted
112.	**FIN**	Para 4.33	Reformulate: The requirement should be clarified. Currently it is not understandable.	Use of semi-colon makes difficult to understand the requirement.	Accepted
113.	**FRA**	4.33/1	Replace "established that" by "established. It"	Alternate wording which emphasizes the need for an accident management programme. The second sentence gives attributes of the programme	Accepted
114.	**NETH**	4.34, 3rd	….. arrangements **shall** be made	Is requirement	Accepted
115.	**UK HSE**	Para 4.35	Replace the words "as appropriate" with "if necessary". This is now more positive in that the need for a periodic review is followed by an update if the review reveals	Improves the clarity of the paragraph	Accepted

			COMMENTS BY REVIEWER		RESOLUTION
			the need for updating. Alternatively just delete the words "as appropriate"; this phrase leads to a lack of clarity.		
116.	**UK HSE**	Para 4.36	Suggest re-wording this paragraph based on the Safety Guide NS-G-2.1 Para 2.2, as follows: "To ensure adequate fire safety in operation, arrangements shall be put in place based on: preventing fires from starting; detecting and extinguishing quickly those fires which do start; and preventing the spread of those fires which have not been extinguished. Such arrangements shall include: (1) application of the principle of defence in depth (2) control of combustible materials and ignition sources (3) inspection, maintenance and testing of fire protection measures (4) establishment of a manual fire fighting capability (5) training and exercising of plant personnel and (6) assessment of the impact of plant modifications on fire safety measures."		Accepted
117.	**FIN**	Title "Radiation	Reformulate: The title should be divided into	There are no need to equate Radiation protection with	Accepted

		COMMENTS BY REVIEWER			RESOLUTION
		protection and radioactive waste management	two different titles “Radiation protection” and “Radioactive Waste Management”. Paras 4.47 and 4.48 are belonging under the title “Radioactive Waste Management” and all other ones under the title “Radiation protection”.	Radioactive Waste Management	
118.		4.44	Delete: “additional related information could be found in the Safety Standards Ref [6] or in relevant safety guides”.		Accepted. The text should be revised taken into account all comments presented
119.	IND	4.44/1	All site personnel including suppliers, contractors, temporary workers and visitors working in…..	Exposure to all persons working at site shall be assessed	
120.	FRA	4.44/3		Is it relevant to refer to [11] and [12] which deals with radioactive waste ?	
121.		4.44/3	Replace “safety standard” by “BSS”	To be consistent with 4.40	
122.		4.44/4	Delete “or in relevant safety guides”	Superfluous. Furthermore, this is already covered by section 1.5	
123.	SPA	4.46 first line	Either delete “the chemistry programme”, or substitute by “the radiation protection programme”.	Radiation dose rates may be controlled within radiation protection programmes. Assigning this function to a chemistry program introduces confusion.	Accepted. The text should be modified to establish clear link between the radiation protection programme and the plant Chemistry programme
124.	FRA	4.46/2	After “components”, add “as well as of radioactivity of the fuel cooling fluid”.	Activity of the fuel coolant has to be monitored.	
125.		4.46/2	After “dose rates”, add “and radioactivity”	To be consistent with comment	
126.	FRA	4.49/2	After “procedures”, add	Clarification	Accepted.

			COMMENTS BY REVIEWER		RESOLUTION
			"consistent with international standards, national regulation and licence conditions,"		
127.	**NETH**	4.50, 1st	….. that a programme is established for the monitoring	wording	Accepted.
128.		4.50/3	At the end, add "and implemented. Conclusions of this monitoring shall be made available to the public living in the vicinity of the plant".	Environmental monitoring results should be made public.	Accepted.
129.		4.54 to 4.57	•Records and Reports' section may be shifted to end of the section	For better representation.	Accepted
130.		4.54/1	Replace "that are important for" by "related to"	Actual wording ambiguous.	Accepted
131.		4.55/1	Delete "documentation"	Superfluous	Accepted
132.		4.56/2	Before « operation », add « plant licensing »	Licensing basis is of utmost importance.	Accepted
133.		4.57	Delete: "energization and"	The first energization of an equipment or a system is usually performed by its manufacturer, sometimes in this one's own shop and not in the NPP. The operating organization cannot be made responsible for recording operation and maintenance before the beginning of commissioning.	Comment is taken into account. The text should be modified to point out the energization during the commissioning stage .
134.	**ENISS**	4.57	Records of operation, maintenance shall be kept starting from the initial ~~energization and~~ operation of each plant system, and they shall be retained by the operating organization in proper archives for periods as	The first energization of an equipment or a system is usually performed by its manufacturer, sometimes in this one's own shop and not in the NPP. The operating organization cannot be made responsible for recording operation and maintenance before the	Comment is taken into account. The text should be modified to point out the energization during the commissioning stage .

		COMMENTS BY REVIEWER			RESOLUTION
			agreed with the regulatory body.	beginning of commissioning.	
135.	**FRA**	4.57/1	Add "including" before "maintenance"	Clarification.	Accepted
136.		4.57/2	Add "important to safety" after "system"	To focus the requirement.	Accepted
137.		4.59/2	At the end, add "Relevant lessons learned from other industry shall be incorporated as needed".	Lessons learned from chemical plant accidents or aeronautical accidents are also useful, for example on a human factor point of view.	Accepted
138.	**UK HSE**	Para 4.61	Include the definition of the term "near miss", which is contained in Footnote 1 (NS-R-2, page 6).	Inclusion of the phrases "low level events" and "near misses" without further explanation gives rise to confusion.	Accepted
139.	**FRA**	4.62	Replace beginning of 4.62 by "Events with safety implications shall be investigated according to their actual or potential consequences to establish…"	Each event has to be assessed. The level of the assessment as to be proportionate to safety implications.	Accepted
140.	**SWISS**	4.62/1-2	Events with significant safety implications shall be investigated to identity their causes including human factors and organizational aspects.	Notion "establish" might be misleading, since it could be interpreted in the sense of "create". The term "root cause" is closely linked to a single event analysis method. Other methods may be also applicable.	Accepted
141.		Para 5.1 2nd sentence	Editorial comment. Suggest replacing "reviewable" with "auditable".	The word "reviewable" appears odd.	Accepted
142.	**FRA**	5.1/2	Delete "for approval"	The regulator may not approve the overall commissioning programme	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
143.	**UK HSE**	Para 5.1 3rd sentence	Clarification is needed that the commissioning programmes should cover the full range of normal operating and credible fault conditions. Also the commissioning programme should be derived from design assumptions within the facility safety analysis report (ie are not just commercially driven).		Accepted
144.	**FRA**	5.1/5	At the end, add "and the licence conditions"	Clarification	Accepted
145.	**FIN**	Para 5.2	Operating procedures and **maintenance procedures** shall be validated to the extent practicable as part of the commissioning programme, with the participation of the future operating personnel.		Accepted
146.	**HUN**	5.2.1	5.2 Operating, test and maintenance procedures...		Accepted, except for "test"
147.	**NETH**	5.5, 1st sentence	The operating organisation ……. to demonstrate that the plant as built is in compliance with the safety analysis report and the operational limits and conditions	Wording	Accepted
148.	**UK HSE**	Para 5.5, 1st sentence	Revert to the opening sentence in Para 4.6 (NS-R-2), which is perfectly clear.	The English in the NS-R-2 (Rev 2) is unintelligible.	Accepted
149.		Para 5.5, 2nd sentence	Revert to the 4th sentence in Para 4.6 (NS-R-2) "No tests shall be performed that could put the plant into conditions	As above, the second sentence is less understandable than its equivalent in Para 4.6.	Accepted

			COMMENTS BY REVIEWER		RESOLUTION
			that have not been analysed."		
150.	**FRA**	5.6/2	Replace "identifying the main phases in the commissioning process which shall require prior approval." by "identifying the phases in the commissioning process which may require prior approval"	Gives flexibility to the regulator to choose when its approval is deemed necessary	Accepted
151.	**FRA**	5.6/8	At the end, add "and, if required, regulatory body approval".	See comment **Error! Reference source not found.**	Accepted
152.		5.8/1	Add "," after "commissioning"	Typo	Accepted
153.	**ENISS**	5.11	Authorization ~~of the operating organization to start commercial~~ to enter operation shall be conditional on the successful completion of all tests of the commissioning programme.	The term "commercial operation" refers to contractual arrangement between utility and vendor and is not what is intended here. To be in line with 5.10, operating organization should be deleted	
154.	**FIN**	Para 5.13	From construction to commissioning, and finally to operation, the plant shall be, monitored, **preserved and maintained** in order to protect plant equipment, to support the testing phases and to maintain consistency with the safety analysis report.		Accepted
155.		5.14/1	Replace operating" by "as-built"	Clarification	Accepted
156.		5.15/2	Add "," after "quality"	Typo	Accepted
157.	**NETH**	5.15, 3rd	……. manufactures under a quality assurance programme	Better term	Accepted
158.	**ENISS**	5.16	The operating ~~construction~~	To clarify … at the very end the	Accepted

			COMMENTS BY REVIEWER		RESOLUTION
			organization …	operating organization as the licensee has to ensure that the plant is build as specified in the licensing process.	
159.	**HUN**	6.1.1	6.1 The operational limits and conditions (OLC) shall have...		Accepted
160.	**FRA**	6.1/4	At the end, add "as well as its licence conditions"	Some licence conditions may imply specific LCO	Accepted
161.	**FRA**	6.2/4	Delete "The necessity for"	Superfluous	Accepted
162.	**FRA ASN**	6.4/1	Delete "or equivalent"	Ambiguous	Accepted
163.	**ENISS**	6.5	Operating personnel directly responsible for the conduct of operation shall be thoroughly familiar and be trained with the operational limits and conditions in order to comply with the provisions contained therein.	To be familiar is not enough to be familiar.	Accepted
164.	**ENISS**	6.8 (2nd sentence)	The OLC shall be modified following this review if it is considered appropriate by the operating organization, and the regulator's approval on these modifications shall be sought if this is required by the country regulations.	For clarity.	Accepted
165.	**FRA**	6.8/2	The OLC shall be modified following this review if it is considered appropriate by the operating organization, and the regulator's approval on these modifications shall be sought if	For clarity.	

			COMMENTS BY REVIEWER		RESOLUTION
			this is required by the country regulations.		
166.	**UK HSE**	Para 6.12	Delete this paragraph.	Operational Limits and Conditions are derived from the Safety Analysis Report/Safety Case, which includes a PSA. Therefore PSA is a feature that is unnecessarily highlighted.	Accepted
167.	**NETH**	6.12, 1st and 2nd	replace operating conditions by operational limits and conditions	Agreed term	Accepted
168.	**FRA**	6.12/2	Delete "for input to the operating conditions"	Superfluous	Accepted
169.		6.13/	At the end, add "and actual plant configuration"	To remind that procedures and documents have to take into account actual plant condition (modifications, upgrades….)	Accepted
170.	**FRA**	6.16		Add a footnote to explain "event based" and "symptom based"	Accepted
171.	**SWISS**	6.17/3	... without the need for identifying the initiator or cause ofthe accident.	Diagnosis (replaced term) has different aspects and the term is used differently in many contexts of safety analysis. Need for diagnosis may be involved as well when "utilizing parameters indicating the plant state".	Accepted, but the text should be modified in different way
172.	**ENISS**	6.18		This § could be better located in the OLC subsection.	Accepted
173.	**FRA**	6.18		Section 6.18 should appear in the OLC chapter, for example between 6.9 and 6.10	

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
174.	**SPA**	6.19 last line	"...and approved **according to the country regulations**".	Some countries have specific regulation that establishes the level of approval required for operations or tests not included in procedures.	Accepted
175.	**NETH**	6.19, 3rd	Addition: Experiments shall not be conducted unnecessarily or without adequate justification	Relevant exclusion of non-routine operation	Accepted, but moved to the safety policy (section 4)
176.	**SLO**	Para.6.22	New text proposed to be included : ....outside control room shall be kept *operable* and free of obstructions ……	General requirement	Accepted
177.	**HUN (P)**	6.23	A system shall be established to administer and control an effective operator aids program. This operator aids control system shall prevent...	We assume that the terms "management control system" and "operator aids control system" are not different. If so, then we suggest to reformulate the sentence.	Accepted
178.	**FRA**	6.33/1	Replace "leaks, corrosion spots, loose parts" by "degraded equipment (leaks, corrosion spots, loose parts, damaged thermal insulation…)"	To have a general idea but not a limited list of deficiencies to correct	Accepted
179.		6.33/2	Delete "and damaged thermal insulation"	See comment **Error! Reference source not found.**	Accepted
180.		6.34	Delete the last sentence: "further guidance could be found in the		Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
			relevant safety guides".		
181.	**IND**	6.34/4	Structures, system and components (SSCs)	Full form of SSCs is needed here since SSCs has not been elaborated (Explained) before in the report.	Accepted
182.	**FIN**	Para 6.34	A chemistry programme **shall be in place during commissioning** and shall provide the necessary chemical and radiochemical support to ensure safe operation. The chemistry programme shall provide the necessary chemical and radiochemical information and assistance to ensure safe operation, long term integrity of SSCs, and minimization of radiation levels. Further guidance could be found in the relevant safety guides.		Accepted
183.	**HUN (P)**	6.34		Since there is no concrete reference better to delete the last sentence.	Accepted
184.	**NETH**	6.34, last sentence	delete	Too open ended	Accepted
185.	**FRA**	6.34/5	Delete "Further guidance could be found in the relevant safety guides."	Superfluous. Furthermore, this is already covered by section 1.5	Accepted
186.	**NETH**	6.35, 1st sentence	**The** chemistry programme	Wording	Accepted
187.		6.37, last	Records shall be kept and …..	Wording	Accepted

		COMMENTS BY REVIEWER			RESOLUTION
		sentence			
188.	FRA	6.37/2	Replace "key" by "relevant"	Clarification	Accepted
189.	ENISS	6.41	Provisions shall be made to ensure that in each reactor only fuel whose design, quality and enrichment ~~have been adequately manufactured~~ are acceptable is loaded in the core. ~~In addition, t~~ The fuel design and enrichment shall be in accordance with design specifications and approved by the regulatory body for use with that reactor. For the introduction of fuel of a new design or modified fuel into the core the same requirements shall be applied [7].	For clarity. Design and enrichment cannot be manufactured	Accepted
190.	HUN (P)	6.41		The first sentence needs some reformulation in order to properly understand the content.	Accepted
191.	CAN	6.41	Change the first sentence to read "Provisions shall be to ensure that in each reactor, only fuel of an approved design is loaded in the core."	The wording of the first sentence is clumsy. Also, fuel enrichment is part of fuel design.	Accepted, but the text is modified as above
192.	NETH	6.42, last line	It shall be confirmed that all core alterations comply with the approved configurations.	Alterations to comply with configurations in approved fuelling programme	Accepted
193.	CAN	Para 6.46	Modify last sentence to read "For example, following batch	Batch refueling is not relevant to all reactors.	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
			refueling,…".		
194.	**UK HSE**	Para 6.49 1st sentence	Replace "radiation safety" with "nuclear safety".	Suggest nuclear safety is better than radiation safety here.	Accepted partially. The text will be reverted to the original version in NS-R-2. The procedure is needed not only to ensure safety but to perform the necessary operations.
195.	**FIN**	Para 6.52 line 3	Reformulate: ….as the regulatory body stipulates.	To use equal wording.	Accepted
196.	**FRA**	6.50/3		Is reference [7] relevant ?	Accepted
197.		6.52	Detailed auditable accounts …, for at least as long as the country regulations stipulate.		Accepted
198.	**ENISS**	6.52	Detailed auditable accounts …, for at least as long as the country regulations stipulates.	Consistency with similar comments	Accepted
199.		Para 6.55	A safety review shall be carried out at regular intervals to deal with cumulative effects of plant ageing and plant modifications, operating experience, technical developments, organizational and management issues as well as siting aspects and aimed at ensuring high level of safety throughout the service life of the facility (or activity).	The soft issues organizational and management should be included.	Accepted
200.	**NETH**	6.55	1st line: **This** safety review ….. 2nd line: …….. operating experience, **current standards**, technical developments …..	Wording Important additional input	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
201.	**NETH**	7.3, 1st	No new text. Question: what is tolerance period in this context? Standard term?		The tolerance period determines the margins within which the assigned MTS&I services shall be carried out without the jeopardizing the functional abilities of the safety related SSCs. The tolerance may be included in the respective limits and conditions.
202.	**FRA**	7.3 (2) (4)		Combine (2) and (4) as operational experience shows actual operating reliability and availability.	Accepted
203.	**NETH**	7.4	Question due to unclear text. Is the meaning of the requirement to be restrictive with new approaches? If yes, then delete 'All' and add 'only' after applied	Unclear text	Accepted by the removal of "All" in the beginning of the sentence
204.	**FRA**	7.4/1	Replace "approved" by "current"	MTS&I may not all be approved and section 7.1 does not require systematic approval.	Accepted
205.		7.5/2	Before "maintain", add "obtain expected availability of SSC and to"	Service life is not the prime concern. From a safety point of view, availability of the system as required by the safety report is and OLC is.	Accepted, the text will be modified to include "the availability during the service life "
206.	**HUN**	7.6.1	...approach to identify failure scenarios...		Accepted
207.		7.7	The operating organization shall ensure that maintenance executed during power operation is implemented …		Accepted
208.	**ENISS**	7.7	The operating organization shall ensure that maintenance executed during power operation is implemented …	For clarity	
209.	**NETH**	7.8, 1st	…….. shall be performed as promptly as practical and in	Repairs not to be postponed	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
			compliance		
210.		7.9 (3)	delete 'be used to'	Consistent formulation	Accepted
211.	**ENISS**	7.10 & 7.11	Move after 7.1	These para do not deal only with surveillance programmes but also with test and maintenance and therefore we suggest moving these para to the general section	Accepted
212.	**NETH**	7.10, 1st	……. For all maintenance, testing	Missing part	Accepted
213.	**HUN**	7.10.2	...surveillance and inspection tasks.		Accepted
214.	**FRA**	7.10/4	Replace "control" by "system"	Consistency	Accepted
215.		7.11	Delete 7.11	Redundant with 7.15	Accepted. The para 7.11 combined with the para 7.15
216.	**FRA**	7.16/2		Should operating crew be defined ? Is it shift personnel ?	Accepted. Replaced by the "shift personnel".
217.	**NETH**	7.18	Delete last sentence	Useless	Accepted
218.	**FRA**	7.18/3	Delete "More guidance could be found in the relevant safety guides."	Superfluous. Furthermore, this is already covered by section 1.5	
219.	**FRA**	7.20/2	At the end, add "Purchase orders shall be such that safety characteristics of items ordered are consistent with plant design".	To close the loop with section 7.19	
220.	**NETH**	7.23	Unclear first sentence		
221.	**CAN**	7.23	Change the first sentence to read "The operating organization shall ensure the effective performance, planning and control of work	Editorial. Wording.	Accepted. The para should be modified

			COMMENTS BY REVIEWER		RESOLUTION
			activities …".		
222.	NETH	7.24	New formulation: The operating organisation shall control the plant configuration in accordance with the operating limits and conditions	Clearer formulation	Accepted. The para should be modified
223.	FRA	7.24/2	At the end, add "as per OLC"	Clarification	
224.		7.25/2	Replace "limit risk to acceptable levels" by "ensure safety"	Clarification. The objective is to maintain safety while being in outage.	Accepted
225.	ENISS	7.28	Delete the last sentence. The interfaces between outage responsible group and other groups including on-site site human resources shall be clearly defined. Operating personnel shall be kept informed of current maintenance, modification and testing activities. ~~The responsibility for safety shall remain with the operating organization~~	Redundant with the last sentence of § 3.35 "overall control, supervision and responsibility for these activities shall stay with the operating organization".	Accepted
226.	FIN	Chapter 9	Reformulate title of chapter and order of contents: 9. ~~LONG TERM OPERATION,~~ EQUIPMENT QUALIFICATION, ~~AND~~ AGEING MANAGEMENT AND LONG TERM OPERATION	Chronological order.	Accepted
227.		9.3.2	...licence term, design limits...		Accepted
228.	FRA	9.3/4	shall use the results of PSR and be approved by the regulatory		Accepted

		COMMENTS BY REVIEWER			RESOLUTION
			body		
229.		9.4 (2)	Replace (2) by "all SSC important to safety"	All SSC important to safety should get throught the screening/categorization process of (3)	Accepted
230.		9.4 (3)	Delete "Screening of SSCs(" and ")"	The rest of the sentence is clearer.	Accepted
231.		9.5/2	At the end, add "according to national regulation"	Practices may vary	Accepted
232.	HUN	9.6	If the LTO program has been implemented and has results than the LTO has already been entered. So it can not be available to the regulatory body BEFORE entering LTO		Accepted. The text 9.6 should be revised
233.	HUN (P)	9.7	The term "safety item" is unusual (second row).		Accepted. Modify to the "safety related item". Look at the Glossary
234.	FRA ASN	9.7	Delete the last sentence: "Effectiveness of EQ programmes in operational NPP shall be reviewed".	Programmes for EQ, and the requirement for reviewing their effectiveness are dealt with in § 9.8	Accepted
235.		9.7/3	Add "postulated" before "accident"	Clarification	Accepted
236.		9.7/5	Delete "Effectiveness of EQ programmes in operational NPPs shall be reviewed"	Redundant with last sentence of section 9.8	Accepted
237.	FRA	9.10	Replace "determine their possible consequences," by ". It shall determine the consequences of ageing"	Clarification	Accepted
238.		9.10/3-4	…, determine the possible consequences of their ageing, and determine …	For clarity	Accepted
239.		9.10/4	At the end, delete "."	Typo	Accepted

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
240.		9.11/1	At the end, add "including PSR"	AMP and PSR are related.	Accepted
241.		9.13/1	Add "ionization radiations," after "temperature"	Radiations do contribute to ageing.	Accepted
242.	**HUN**	9.13.1	...effects arising from operational and environmental conditions...		Accepted
243.		9.13	The programme shall take into account the safety relevance of the SSCs.		Accepted
244.	**CAN**	10.5.	Change wording to " … to ensure that common systems and equipment are fully available to support safe operation of the generating unit(s)."	Editorial. Wording.	Accepted
245.	**NETH**	10.5, 2nd	…… for safe operation **of** the unit(s)	wording	Accepted
246.	**FRA**	10.6/2	Replace "eventual" by "future"	Decommissioning will happen	Accepted
247.	**NETH**	10.7	…… activities in **the** transition …. …. managed **to avoid undue**	clearer	Accepted
248.	**FRA**	10.7/2	At the end, add "and safety ensured."	Clarification	Accepted

KEY:

CAN = Canada
ENISS = European Nuclear Installation Safety Standards Group
FIN = Finland
FRA = France
HUN = Hungary (Technical Support for the Regulatory Body)
HUN (P) = Hungary (Paks NPP)
IND = India

Safety of Nuclear Power Plants - Operation (DS-413)

COMMENTS BY REVIEWER	*RESOLUTION*
NETH = Netherlands (Holland) PAK = Pakistan SLO = Slovak Republic SPA = Spain UK (BE) = United Kingdom (British Energy) UK (HSE) = United Kingdom (Health $ Safety Executive)	

Safety of Nuclear Power Plants - Operation (DS-413)								
COMMENTS BY REVIEWER					*RESOLUTION*			
	Country	*Para/Line No.*	*Proposed new text*	*Reason*	*Accepted*	*Accepted, but modified as follows*	*Rejected*	*Reason for modification/rejection*
1.	UK HSE	General		The document is disjointed, poorly written in parts and substantial editing is needed to get the document into shape.	*For discussion*			
2.		General	The following have been identified as possible gaps: ▪ Quality Assurance – there is little mention of the requirements for work to be undertaken against Quality Management Systems (LC 17) ▪ Decommissioning – decommissioning does not appear to be explicitly mentioned but design and operations of NNP must have an eye on eventual decommissioning (LC 35) ▪ Control of Organisational Change – perhaps this could be included in Para 3.2 and the sections that follow it (LC 36)	A comparison against standard Licence Conditions (where they might apply to nuclear power plant (NPP) operations) has identified some possible gaps in DS 413.	*For discussion*			
3.		General	There may be an advantage in considering the following: ▪ Multi-facility sites may cause operational problems where for example there are shared resources. There is a need to stress co-operation between	Although HSE's Safety Assessment Principles for Nuclear Facilities (SAPs) are aimed at safety cases rather than plant operations, a comparison of the SAPs has identified some obvious gaps in DS 413.				

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
			operators and/or written agreement (SAPs Paras 35-37). ▪ Essential supplies are needed to ensure continued safe operations, eg coolant, electrical power, diesel for back-up generators (SAPs ESS.16, EES.1, EES.9). ▪ Nuclear Materials Accountancy does not appear to be mentioned explicitly. It could be included in the section on operational records and reports (SAP ENM.8) Alarm management – guidance is needed on the prioritization of alarms and the tolerance of standing alarms (SAP ESS.14)		***For discussion***
4.	**PAK**	Title	The title should be changed as, "Safety of Nuclear Installations: Operation"	If you go through document carefully, it seems that the written requirements are 90% applicable for all nuclear installations rather than Nuclear Power Plants only. It is proposed that the document may be revised by accepting the proposed title. NS-R-4 may also be withdrawn because of the following bases: a. Site Evaluation has been covered in NS-R-3. b. Design will be covered in NS-R-1 by changing the title. Operation will be covered in this	***For discussion***

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
				draft safety standard.	
5.	**HUN**	1.7	Until the transition to decommissioning up to end of removal of all the nuclear fuel	The plant is operational if the fuel is still there	For discussion
6.	**FRA**		Delete "matters specific to"	Superfluous	For discussion
7.	**NETH**	2.3	No new text but remark. Industrial safety used to be excluded. Is it justified to add this issue and if yes is the coverage sufficient	.Clarity about scope	For discussion .
8.	**UK HSE**	Section 2, Para 2.1	Recommend replacing this Para 2.1 with Para 2.1 from the Safety Objectives in the Safety Fundamentals.	This seems to be a new section and its origin is unclear. Is this an attempt to paraphrase the Safety Fundamentals (SF)? Replacing para 2.1 in current draft has the benefits of giving a direct link to the overall Safety Objectives and provides consistency of approach and wording of the standards.	For discussion
9.		Para 2.2 and 2.3	Delete these paragraphs. Adopt the wording from the Safety Objectives in the Safety Fundamentals.	These paragraphs are repetitive and unclear. The meaning of the last two sentences of Para 2.2 is particularly unclear	For discussion
10.		Para 2.1 5th sentence	This text says that "…it is necessary to limit the risks…". But in later paragraphs, eg 4.10 and 4.51, reference is made to ALARA. Suggest that		For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
			reference to ALARA is made to the text in Para 2.1.		
11.	**ENISS**	2.2	…., which is to protect people and the environment from the harmful effects of ionizing radiation, and related safety principles #1, 3, 5, 6, 7, 8 and 9 [1]. They are interdependent. The requirements, derived from these principles, shall be applied to minimize and control the risks to site personnel, the public and the environment from the effects of ionizing radiation. ~~They are interdependent. The technical aspects are in conjunction with management aspects while procedural measures ensure defense against hazards due to ionizing radiation.~~	For clarification.	For discussion
12.	**UK HSE**	Para 2.2 2nd sentence	The text says "…minimize and control…". There is a need for consistency with other paragraphs in DS 413 regarding reference to ALARA. Suggest that reference to ALARA is made to the text in Para 2.2.		For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
13.	**UK HSE**	Para 3.1	Reword as follows: "The management system established by the operating organisation shall ensure that the plant is operated in a safe manner and in accordance with all legal and regulatory requirements. The operating organisation shall provide the necessary resources and support to ensure that the plant is safely managed. The management system shall integrate all the elements of management so that processes and activities that may affect safety are established and applied coherently with other requirements, including those for leadership, human health and performance, environment, security, quality and business, and so that safety is not compromised by other requirements or demands. In addition the management system shall promote a strong safety culture, provide for regular assessment of safety performance and the application of lessons learned from experience. Effective leadership in safety matters has to be demonstrated at the highest levels in the operating organisation.	Rewording suggested giving clearer focus and removing the need to point directly to references in brackets in the text of the opening sentence. The omission of the need for strong leadership, here or anywhere else in the document, needs to be addressed (refer Safety Fundamentals SF-1, Principle 3 Leadership and management for safety).	Acceptable, still needs discussion

			COMMENTS BY REVIEWER		RESOLUTION
			A strong safety culture includes: Individuals and collective commitment to safety on the part of the leadership, the management and personnel at all levels: ▪ Accountability of organisations and of individuals at all levels for safety; ▪ Measures to encourage a questioning and learning attitude and to discourage complacency with respect to safety.		
14.	**FIN**	Para 3.1 The last sentence.	Delete: ~~Further guidance on application of management system in operation may be found in the relevant safety guide.~~	This kind of sentence does not make any added value for the end-user.	For discussion
15.	**NETH**	3.1 after last line	Insert para 2.19 and 1st sentence of 2.20 of NS-R-2 (2000) as follows: As part of the management system the operating organisation shall prepare and put in place ….rest of 2.19 The operating organisation and other organisations and persons concerned …2.20…… other Nuclear Installations [10]	QA is an important part of the management system that warrants a top mentioning. Now the only referencing is on page 27 in the issue of spare parts	For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
16.	**HUN (P)**	3.2		This is the first place where "operating organisation" is mentioned. It is not clear who is assumed as an operating organisation. Is it the legal entity who has the ownership or the entity who represents the owner(s) of the nuclear power plant? Or is it the legal entity (a utility) who is the holder of the operating license?	For discussion
17.	**UK HSE**	Para 3.2 1st sentence	There is a need to ensure that the operating organisation is clearly identifiable (it is not always obvious) and is a legal entity.		For discussion
18.		Paras 3.2 – 3.5	Clarification needed.	Although the title of this section is FUNCTIONS AND RESPONSIBILITIES, there is no indication or separation of these aspects in the text that follows. Instead, Para 3.3 talks about functional responsibilities. The existing NS-R-2 separates these two different aspects and also incorporates comments on the organisational structure, which is almost inevitable in discussions of functions and responsibilities; they are so interlinked	For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
19.	**ENISS**	3.3 3.4 (2) 3.6 (1st sentence)		These points are dealing with the same issues and should be combined in one (delegation of authority, communication and responsibilities)	For discussion
20.	**NETH**	3.4 (2)	presentation of issues as a list in stead of ;	editing	For discussion
21.	**FIN**	Para 3.4 bullet (2)	Reformulate: A sentence should be restructured without using semi-colons.	Use of semi-colon makes more difficult to understand the requirement.	For discussion
22.		Paras 3.6 – 3.8		Despite the title, these paragraphs actually say very little on the structure of the operating organization. Although documentation of the structure and changes to it, and regulatory involvement, are mentioned there is not much information on how the operating organization should be structured.	For discussion
23.		3.8	The operating organization shall be responsible to verify and prove that the plant equipment and documentation is in conformity with the approved design, through a strong configuration management process. The part of this process dealing with defining the design changes from one version to another, and if necessary getting them approved, shall be assigned to a design	A consistency must be permanently ensured between the plant state (as built, including the implementation of modifications), the safety studies and the safety report, and the operating documents, and it is the responsibility of the operating organization as a whole to ensure this consistency, through a strong configuration management. A design authority has only to control the evolutions of the design, and get them approved if required.	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			authority, which can be entrusted to an internal specialized body or to an outside organization.		
24.	**ENISS**	3.8	Delete this paragraph and add on 3.4 an additional item: safeguarding design and safety case integrity, which includes ensuring that the plant is operated in conformity to the approved design and safety case envelope.	The first sentence is already included in 9.1 and 9.2 and in the second sentence instead of talking about design authority the corresponding function should be explained and included in the management system as an additional item of 3.4	For discussion
25.	**FIN**	Para 3.8	Delete: ~~The operating organisation shall be responsible to verify and prove that the plant is in conformity with the approved design. The totality or parts of this process called configuration management shall be assigned to a design authority, which can be entrusted to an internal specialized body or to an outside organisation [7].~~	Design authority as a term is misleading. There would be many other issues, which require corresponding requirement, as fire protection, physical protection, maintenance etc. Accordingly it is better to delete whole the para.	For discussion
26.	**FRA**	3.11/3	Replace "group" by "organization"	Consistency (operating group is not defined).	For discussion
27.	**ENISS**	3.13		In order to avoid different translations in national languages, the concept "mental stress" should be defined in the IAEA glossary	For discussion
28.	**UK**	Paras 3.15		The rationale is not clear why the	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
	HSE	– 3.29		two sub-sections, Human Factors and Qualification and Training, are in Section 3. Qualification and Training of Personnel has its own section in NS-R-2. These two topics are not about the "Management System of the Operational Organisation" as the section title suggests. They include, or are, activities to be managed and undertaken like others outlined in both Sections 4 and 6. Section 3 is best focussed on those aspects that are overarching in relation to the management system, ie how it is structured to allow for management of all the necessary elements needed to safely operate the NPP.	
29.	NETH	3.19	new paras after 3.19: 3.20 All personnel of the operating organisation whose duties may affect safety shall be medically examined on appointment and at intervals subsequently as required to ensure their fitness for duties and responsibilities assigned to them. 3.21 It shall be ensured that operating personnel are knowledgeable of, and have control over, the status of plant systems and equipment for all	Essential requirements for operating personnel	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			operational states. Only designated and suitably qualified members of the operating personnel shall control or supervise any changes in the operational states of the plant.		
30.	**UK HSE**	After Para 3.20	Insert a new paragraph after Para 3.20: "The management system shall provide for the appointment of authorised persons performing certain functions that may affect plant safety. Formal authorisation is the granting of written permission, by the operating organisation or regulatory body to perform specified activities and to discharge specified responsibilities, or the document granting such permission. As a minimum, the person(s) who occupy the following position should be formally authorised and periodically re-authorised: ▪ The staff member(s) designated to directly supervise operation of the plant or of the unit and gives commands to the shift. ▪ Operators who manipulate	A separate paragraph is required on the need for Authorisation, particularly for reactor desk operators and shift supervisors. These individuals arguably have the highest potential to affect nuclear safety through direct plant manipulation and reacting to plant abnormalities.	For discussion

		COMMENTS BY REVIEWER			RESOLUTION
			control equipment and safety related instrumentation (ie reactor desk operator).		
31.	CAN	3.29.	Delete stated requirement for simulator to cover DBAs and BDBAs.	We know that it is possible to program simulators for normal operation. And it MAY BE possible to program them properly for some DBAs. But there could be serious difficulties programming simulators for unknown BDBAs. Also, BDBA response typically relies on field activities that are NOT executed from the main control room panels.	For discussion
32.	UK HSE	Para 3.29	Suggest it would be useful to replace Para 3.29 with a modified version of Para 3.10 (NS-R-2) that includes the availability of maintenance/ technical training facilities	This seems to be an attempt to replace the existing Paras 3.10 to 3.12 in NS-R-2. A few aspects have now been lost or are not as clear. The paragraph seems to be about operating personnel it does not include maintenance personnel. Flow loops and other plant hardware like valves, pumps, electrical circuits etc are usually provided to train maintenance staff away from the plant so that mistakes can be made without threatening the plant. Current Para 3.10 alludes to this but does not go far enough in this area.	For discussion
33.	IND	3.29/3™	New sentence " Necessary Iraining for a number of agreed beyond design basis accidents shall be provided"	Simulator Training for BDBA's may not be possible air flie times. Better to mention	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			to be added in place of 'as well as for a number of agreed beyond design basis accidents1	the training for BDBA separately as suggested.	
34.	**HUN**	3.29.3	...as well as for selected beyond design basis accidents.		For discussion
35.	**HUN**	3.34	All demands exceeding these regulations shall be explained and justified	Confusing sentence (It is not clear if the "demand" is from the side of the regulators or from the plant	For discussion
36.	**UK HSE**	Section 4 Safety Policy	Consider restructuring the 9 paragraphs under Safety Policy. Paras 4.1 – 4.4 could be considered as policy related. The subsequent paragraphs seem to be a mixture of more detailed matters. For example Para 4.5 is a basic requirement of a licence and Para 4.8 seems to be about authorising CCR staff. Para 4.7 would better fit in the next sub-section "Performance of Safety Related Activities", possibly after Para 4.12.	Improved English makes the sentence easier to read.	For discussion
37.	**UK HSE**	Section 4, Emergency Preparedness	Suggest the version contained in this draft is used in conjunction with "Emergency Preparedness" (NS-R-2)	This whole sub-section seems to be a slight reworking of that in NS-R-2 but to no advantage; if anything, it is now less clear that the current version (NS-R-2).	For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
38.	**SLO**	Para.4.1	New text proposed to be included after last sentence: The policy should consider establishment of the barriers according to defence in depth concept.	INSAG 10	For discussion
39.	**FRA**	4.5/5	Delete: "A systematic safety reassessment shall be conducted periodically".	For clarity: it is necessary not to confuse, on the one hand the need for regular operational safety assessments (dealt with in this § 4.5, and done through self-assessments, audits, etc), and on the other hand periodic comprehensive safety reviews (dealt with in § 6.54 to 6.57; in France every ten years).	For discussion
40.		4.9/4	At the end, add "Such revalidation shall be carried out prior to restart unless physically impossible".	Clarification	For discussion
41.	**UK HSE**	Paras 4.10 - 4.12	The safety limit/safety margin operating philosophy, as outlined in IAEA Guidance NS-G-2.2, should be more visible. It should be embedded in the safety analysis but the plant operator needs to understand the plant operating procedures in the context of normal operations, fault conditions, safety margins, safety limits.		For discussion
42.	**ENISS**	4.12	Written procedures should be available for activities, depending on the safety significance, complexity and frequency of the task.	ENISS insists on a graded approach: not all procedural details need to be written.	Rejected. All safety related activities shall be conducted in accordance with the written procedures For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
43.	**UK HSE**	Para 4.13	This paragraph is focused on event reporting and maybe it would be better to include it in the section "FEEDBACK OF OPERATIONAL EXPERIENCE"		For discussion
44.	**NETH**	4.17	After 4.17 a new para: The operating organisation shall ensure that regular peer reviews of the operation of the plant are conducted, with the aim of ensuring that an appropriate safety consciousness and safety culture prevail, that the provisions set forth for enhancing safety are observed, that the documentation is up to date and that there are no indications of overconfidence or complacency. Where practicable, suitable objective performance measures shall be used. The results shall be made available to plant management and appropriate corrective actions shall be taken.	Essential requirement for safety management review is missing	For discussion
45.	**FRA**	4.20/4	Delete "IAEA recommendations for the physical protection of nuclear material and nuclear facilities may be found in Ref. [5] and other documents of the IAEA	Safety standard is a top-down approach so referring to lower level document is not appropriate. Furthermore, this is already covered by section 1.5	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			Nuclear Security Series."		
46.	**FIN**	Para 4.21	structures, systems and components important to safety. These measures shall include the controlled access to specific rooms or compartments, an effective key control system**, information security** and/or other measures to prevent unauthorized intervention on specified equipment.	Information security is missing	For discussion
47.	**FRA**	4.21	Delete "and/or other measures to prevent unauthorized intervention to safety related valves, breakers or other specified equipment", or else replace "intervention on" by "access to"	The plants have been designed so as to prevent unauthorized access, but never so as to prevent unauthorized intervention on specific pieces of equipment. This requirement could mean that each piece of equipment would need to be located in a specific room with a specific lock and could impose impossible modifications to existing plants.	For discussion
48.	**FRA**	4.22/2	Replace "by managing accident, mitigating their consequences" by "in case of accident conditions, mitigating the accident consequences".	In IAEA glossary, accident management covers only BDBA. Emergency preparedness shall cover all accident conditions	Accepted. First sentence should be rephrased to comply with the IAEA Glossary and the other IAEA publications related to the emergency preparedness. For discussion
49.	**UK HSE**	Section 4 Records and Reports Paras 4.53-4.55	Suggest combining Paras 4.53 – 4.55 into a single paragraph. Reference can be made to GS-R-3. Rely on the reader seeking out the reference for more detail. Recommend retaining some basic information such as that contained in the list given in NS-R-2 Para 9.2.	This section is rather piecemeal; it refers to GS-R-3 for further information in 3 paragraphs (ie 4.53-4.55).	For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
50.	**FIN**	Para 4.57	Records of **manufacturing, construction, commissioning,** operation, maintenance shall be kept starting from the initial energization and operation of each plant system, and they shall be retained by the operating organization in proper archives for periods as agreed with the regulatory body.	Safety relevant information is produced already during manufacturing, construction and commissioning.	For discussion
51.	**FRA**	4.61	The plant management shall nurture a feeling of trust so that plant personnel are encouraged to report all events with a possible safety significance, be they potential equipment failures, human performance problems, procedural deficiencies, or documentation inconsistencies.	The objective is to anticipate corrective actions before safety performance get impaired. But there is a large margin of interpretation as to what is a low-level event and what is a near miss and what should be declared, and there is no means to verify that all such things are reported. So EDF believes that what is needed is that the managers nurture a climate of trust and confidence, in order to encourage plant personnel to declare many low-level events and near misses.	For discussion
52.	**ENISS**	4.61	The operating organization shall develop programs to induce plant personnel in reporting all events, including "low level events" and "near misses", potential problems that are linked to equipment failures, human performance problems, procedural deficiencies, or documentation inconsistencies relevant to the	The objective is to anticipate corrective actions before safety performance get impaired. But there is a large margin of interpretation as to what is a low-level event and what is a near miss and what should be declared, and there is no means to verify that all such things are reported. In addition, as stated in the last NUSSC meeting a standard cannot	

			COMMENTS BY REVIEWER		RESOLUTION
			safet of the plant.	impose requirements directly on staff but only on organization or management.	
53.	HUN	4.62	to be deleted	see: 4.13	To discuss in the context of the comments to 4.13
54.	FRA	4.64	Delete "by designate competent persons"	Superfluous	For discussion
55.	NETH	After subsection feedback of oper. experience.	New subsection as follows: OPERATIONAL DECISION-MAKING 1. Results and insights gained from Safety Assessments including when applicable the Probabilistic Safety Assessment shall be used in an integrated approach in operational decision-making. Operational applications may include programme and procedure improvements, configuration management including the use of risk monitors, technical specification improvements, maintenanc planning and management, in-service testing, and graded quality assurance. Also decision-making regarding Long Term Operation, Power Upgrades shall be made in an integrated approach.	Operational decision-making is important issue that warrants complementary attention	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			2. In all cases the need for the integrated decision shall be clearly stated, documented and understood by all responsible management. 3. Integrated Decision-Making shall comprise the following key elements: - the maintenance and impact of the decision(s) on the defence-in-depth concept, - the maintenance and impact of the decision(s) on adequate engineering safety margins, - risk insights provided by probabilistic safety assessments or other appropriate tools, - compliance with applicable regulations and licence conditions, - insights from previous integrated decisions and subsequent experience.		
56.		Para 5.4	Editorial comment. Suggest replacing "baseline" for something like "normal operating conditions" or "normal margins of safety".		For discussion
57.	**NETH**	5.4	Additional para after 5.4 (see R-2 (2000) para 4.12):	Missing objective of the commissioning programme.	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			All the functions of the operating organisation shall be performed at the appropriate stages during commissioning. Thes functions shall include responsibilities for management, training of personnel, the radiation protection programme, waste management, managements of records, fire safety, physical protection and the emergency plan.		
58.	**CAN**	Para 5.5	Modify first sentence as follows: "The operating organization shall ensure that the commissioning programme includes all the tests necessary to demonstrate that the limits and conditions assumed in the safety analysis report are in compliance with the plant as installed."	Clarification of intent. Original sentence "…demonstrate that the safety analysis report and limits and conditions are in compliance…" is incorrect.	For discussion
59.		5.7/4	After core, add "(or to the fuel pool for structures and systems related to this pool)	Fuel building systems have to be commissioned before fuel arrival at site so that systems are available an can be operated.	For discussion
60.	**ENISS**	5.11	Authorization ~~of the operating organization to start commercial~~ to enter operation shall be conditional on the successful completion of all tests of the commissioning programme.	The term "commercial operation" refers to contractual arrangement between utility and vendor and is not what is intended here. To be in line with 5.10, operating organization should be deleted	

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
61.		5.13	From commissioning to operation, the plant shall be monitored …	The construction phase before commissioning is not in the scope of the present document (cf § 1.7). Moreover, during the construction phase, the monitoring requirements cannot be the same as from the commissioning period and the operation period.	For discussion
62.	**FRA**	5.13	From commissioning to operation, the plant shall be monitored …	The construction phase before commissioning is not in the scope of the present document (cf § 1.7). Moreover, during the construction phase, the monitoring requirements cannot be the same as from the commissioning period and the operation period.	For discussion
63.		5.14/1	Add "construction and " before commissioning	Clarification	For discussion
64.	**UK HSE**	Para 5.16	Consider including a general comment on the need to involve the Design Authority in any design modifications.	See also Para 3.8.	For discussion
65.		6.1.2	...which could lead to beyond design basis and limiting the...		For discussion
66.	**FRA**	6.1/2	After "lead to", add "anticipated operational occurrences or"	To include everything but normal operation.	
67.		Paras 6.1 to 6.4 with the title	Reformulate: To add the title Preparation of operational limits and conditions under the Chapter 5 Plant Commissioning and to move paragraphs 6.1 to 6.4 therein.	Operational limits and conditions are needed already in commissioning stage.	For discussion
68.		Para 6.11	It is not clear what this		

			COMMENTS BY REVIEWER		RESOLUTION
			paragraph is trying to convey; is it abnormal and/or fault or accident conditions and if so are the instructions referred to the symptom-based operating procedures? The second sentence seems to contradict the first. In addition the English need improvement.		For discussion
69.	**FRA**	6.11/3	Replace "clear proceduralized instructions shall be developed to cater for such operations. These instructions shall include" by "the OLC shall describe"	Alternate wording which emphasizes that such instruction shall appear in the OLC.	
70.	**NETH**	6.13	before para 6.13 additional para (see R-2 (2000) para 5.11): Operating procedures shall be developed which apply comprehensively for normal, abnormal and emergency conditions, in accordance with the policy of the operating organisation and the requirements of the regulatory body. The level of detail for a particular procedure shall be appropriate for the purpose of that procedure. The guidance provided in the procedure shall be clear, cocise, and as far as possible verified and validated. Strict adherence to written operating procedures shall be an essential element of safety policy at the plant.		For discussion

			COMMENTS BY REVIEWER		RESOLUTION
71.	**ENISS**	6.26	The plant information systems design shall be such that off-normal conditions are easily recognizable by the operators and that the control room alarms are clearly prioritized. Optimization of the alarm system shall be reviewed periodically. The number of alarms calling for short term operator actions, including process computer alarm messages, shall be minimized, considering the operational states of the plant.	For clarity: it is better to clearly distinguish, on the one hand the specifications for alarms design (a lot of literature has been produced on this complex matter) and on the other hand the specifications for alarms operation.	For discussion
72.	**FRA**	6.26	The plant information systems design shall be such that off-normal conditions are easily recognizable by the operators and that the control room alarms are clearly prioritized. Optimization of the alarm system shall be reviewed periodically. The number of alarms calling for short term operator actions, including process computer alarm messages, shall be minimized, considering the operational states of the plant.	For clarity: it is better to clearly distinguish, on the one hand the specifications for alarms design (a lot of literature has been produced on this complex matter) and on the other hand the specifications for alarms operation.	
73.	**NETH**	6.26, last sentence	delete	Too much isolated requirement and covered by broader requirements	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
74.	**CAN**	Para 6.26	Modify last sentence to read "The number of control room alarms, including process computer alarm messages, shall be minimized for any analyzed operational state of the plant."	Clarification of intent. Cannot minimize for unanalyzed states, by definition	
75.	**UK HSE**	Para 6.34 et seq	Quality Assurance should be mentioned here.		For discussion
76.	**FRA**	Para 6.39	The use of chemicals **and other materials which might influence safety related systems, components and structures** including those brought by contractors shall be controlled.	The term chemicals does not include e.g. ion-exchange resins, tapes and grinding materials.	For discussion
77.	**SPA**	6.41 second sentence	"In addition, the fuel design and enrichment shall be in accordance with design specifications and approved by the regulatory body for use with that reactor, **if required by regulation"**.	It does not seem justified that specific nuclear designs and enrichments require always approval. When a certain fuel type, with mechanical characteristics, geometric dimensions and a given enrichment distribution, is to be loaded for the first time in a reactor, approval should be requested. However, if	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
				subsequent reloads use the same fuel type with some changes in pin-by-pin enrichments or burnable absorber loadings, approval should not be a generic requirement, provided that specific criticality and reload analyses have been performed that show compliance with existing limits.	
78.	**FRA**	6.52/1	Start sentence by "As part of the safeguard programme"	To make a link with safeguards regulations	For discussion
79.		6.53/2		What about BDBA ?	For discussion
80.	**HUN (P)**	6.53 and 6.15		The 6.53. contains much more detailed and specific requirements for the EOP of the fuel handling than the 6.15 that is the requirement for EOP of the plant. We suggest to coordinate and equilibrate the content of these requirements, or delete the second sentence of 6.53. RESOLUTION Accepted Accepted, but	For discussion

			COMMENTS BY REVIEWER		RESOLUTION	
				modified as follows Rejected Reason for modification/rej ection		
81.	**FIN**	Para 6.54	The safety review of the plant shall be performed periodically at least every ten years. The scope of the safety review shall include all safety aspects of an operating plant.	intervals of the review is added	For discussion	
82.	**NETH**	6.54	Replace by: In addition to safety reviews driven by special reasons (e.g. incidents, new safety insights) periodic integral safety reviews of the plant shall be performed in accordance with the country's regulations	This important requirement needs more introduction		For discussion
83.	**IND**	6.54/2nd	The scope of the safety review shall include all-safety aspects of an operating plant and in accordance with regulatory requirement1.	Scope of review should be in line with regulatory requirements also.		
84.	**UK** **BE**	Paras 6.54 – 6.57	It would be more appropriate to use the original wording (describing the requirements of PSA) with improvements, as presented in an earlier draft of this safety standard.	These paragraphs in Draft 7 of DS 413 represent a very simplified and inadequate description of the requirements of PSA.		
85.	**FIN**	Para 6.54 +	The operating organization shall agree with the regulatory body the scope and content of the periodic safety review. The review shall identify and evaluate the safety significance of deviations from applicable current safety	new requirements, reference not only the licensing basis but also the current standards and internationally recognized good practices		

			COMMENTS BY REVIEWER		RESOLUTION
			standards and internationally recognised good practices currently available.		
86.	IND	6.55/2	..plant ageing, equipment qualification, plant modifications,..	Additional text	For discussion
87.		6.56/2nd	'safety review affecting the license requiring regulatory review1	The sentence is modified to cover the review of PSR by Regulatory bodies.	For discussion
88.	FRA	6.56/2	Replace "confirmed findings of the safety review affecting the license" by "findings of the safety review and the proposed upgrades to the plant"	Even if a finding is not affecting the license, it should be reported to the regulator. Furthermore, proposed upgrades should be communicated to the regulator.	For discussion
89.		6.57	**As necessary**, …to safety of different aspects of the plant operation.		
90.	FIN	Para 6.57	The review shall use an up to date, systematic, and documented methodology. In order to complement the deterministic assessment, the probabilistic safety assessment (PSA) shall be used to provide insight into the relative contributions to safety of different aspects of the plant.	The assessment shall be systematic and deterministic and probabilistic methods shall be used.	For discussion
91.	NETH	6.57	In order to complement the deterministic assessment, the probabilistic safety assessment (PSA) shall be used where appropriate in the periodic safety review to provide insight in the relative	More balanced text	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			contributions to safety of different aspects of the plant.		
92.	**HUN (P)**	6.57	In order to complement the deterministic assessment, the probabilistic safety assessment (PSA) shall be used for input to the safety review to provide insight into the relative contributions to safety of different aspects of the plant	What kind of "design process" was meant? We assume that there is already an intemational consensus that PSA is a requisite of a proper periodic safety review, so we think it could be explicitly required. We suggest to change and simplify the sentence this way.	
93.	**NETH**	After 6.57	New para (see R-2 (2000), para 10.6): On the basis of the results of the periodic safety reassessment, the operating organisation shall implement any necessary corrective actions and any reasonable practical modifications to improve safety.	It is necessary to mention the final objective of the PSR	
94.	**SWISS**	6.57/1-4	~~In case of necessity.~~ In orader to compliment the deterministic assessment, the probabilistic safety assessment (PSA) shall be ~~used as part of the design process~~ for input to the safety review to provide in sight into the relative contributions to safety of different aspects of plant.	"In case of necessity" is true for many para.. Furthermore, in many countries at least parts ofthe PSA should be updated for the Periodic Safety Review (PSR). The design process is not part ofthe PSR. The last part ofthe sentence is not necessary or unclear (what is a relative	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
				contribution?).	
95.	FIN	Para 6.57+	An overall assessment of safety based on the results of the reviews in different safety areas shall be provided and adequate confidence in plant safety for continued operation demonstrated.		
96.		Para 6.57 +	The operating organization shall take all reasonably practicable improvement measures as a result of the review.	new requirements, as a result there should be an action plan	
97.	HUN	6.57.2	...(PSA) shall be used as part ofthe safety review...		
98.	FRA	7.6/3	At the end, add "as needed"	PSA are less appropriate for structure and components than for systems…	For discussion
99.	HUN (P)	7.16	It is not clear what kind of cumulative effect is mentioned here? Is it the cumulative effect of documenting deficiencies?		For discussion. The text looks clumsy and should be revised
100.	FRA	7.18/3	Delete "More guidance could be found in the relevant safety guides."	Superfluous. Furthermore, this is already covered by section 1.5	
101.	ENISS	7.19 -7.22	Delete	The essential requirement of this section is 7.18. The other requirements are already mentioned in guides. Reference 10 is not longer valid	For discussion
102.	FRA	7.20/2	At the end, add "Purchase orders shall be such that safety characteristics of items ordered are consistent with plant	To close the loop with section 7.19	

			COMMENTS BY REVIEWER		RESOLUTION
			design".		
103.	**HUN(P)**	8.2		We suggest to reformulate the second sentence of the requirement that is to difficult to interpret.	For discussion. Need for revision
104.	**SPA**	8.2 second line	"which **adversely** affect the bases".	In general, a screening method similar to NRC 50.59 should be considered acceptable to identify which plant modifications require prior approval by the regulatory body. It is considered that a plant modification with positive effect on he licensing bases should not require approval.	For discussion. Need for revision
105.	**FRA**	8.2/1	Add a footnote after "Modifications" by transferring the text already in 8.2 "Modifications to structures, systems and components important to safety which affect the bases on which the operating license was issued, to the operational limits and conditions or key procedures or document to the licence"	Explanation only	

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
106.	**SWISS**	8.2.1	... modification planning and control		
107.	**FRA**	8.2/4	Delete "prior approval and for introduction of changes to the operating license, if required by the country's regulations. Any other proposed"	Superfluous as the last sentence of 8.4 states that regulatory approval may be needed.	
108.	**SWISS**	Between 8.3. & 8.4.	The modification process shall ensure that the consequences of the modification on human tasks and performance are systematically analysed. The human and organizational factors shall be adequately considered in all plant modifications.		For discussion
109.	**FRA**	8.6/	Replace "as soon as possible" by "to have them available at their intended place of use"	Operator should have update documents available as soon as the system is returned to service.	
110.	**SPA**	8.6 first sentence	"The plant management shall establish a procedure for updating documents ~~as soon as possible~~ after a modification important to safety has been installed and tested".	It is important to promptly update documentation that has to be available for operation. However, a certain delay (up to several months) should be acceptable for	For discussion

			COMMENTS BY REVIEWER		RESOLUTION
				updating all engineering documents. A plant modification may affect many documents, and the same plant document may be affected by several plant modifications whose implementation is close in time. The update process should be efficient in order to allocate resources properly.	
111.	**ENISS**	8.6	Before commissioning modified plant or putting plant back into operation after modification, personnel shall have been trained, as appropriate, and all relevant documents necessary for plant operation shall have been updated.	We suggest expanding this requirement to cover personnel training as well as documentation updating before plant restart. This comes from WENRA RL Q 4.3 (issued Jan 08)	For discussion.
112.	**NETH**	8.6	Additional para after 8.6 (see R-2 (2000) para 7.7): Prior to putting the plant back into operation after modifications, all relevant documents necessary for the operation of the plant after the	Important requirement missing	

			COMMENTS BY REVIEWER		RESOLUTION
			modifications (in particular the documents for shift operators) shall be updated and personnel shall be trained as appropriate.		
113.	**HUN**	8.6.1	...shall establish a configuration control procedure...		For discussion.
114.			After 9.7, add the following section "EQ shall be an integral part of the safety case of the NPP. Results of the EQ programme shall be communicated to, and if required approved by, the regulatory body"	EQ is a major aspect of a safety case.	For discussion
115.	**CAN**	Para 9.8 and 9.10	Add "…design basis accident conditions."	Only design basis accidents are relevant	For discussion
116.		Para 9.8	In last sentence, clarify when the effectiveness of EQ programmes shall be reviewed.	Requirement is too vague. At what frequency should the review be performed? Should it be periodic consistent with the PSR, or continuous, or at some other interval?	For discussion
117.	**SLO**	Ch. 10	Paragraphs 10.1 and 10.2 are not relevant to transition period. The text as it is belongs to the chapter 3, paragraph FUNCTIONS AND RESPONSIBILITIES.	Conclusions on IAEA Technical meeting held on 9.9.-12-9.2008	For discussion

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
118.		Ch. 10	New paragraph proposed to be included: Operating organisation should establish an organisational plan including general policies, lines of responsibility and authority, lines of communication, duties and human resources for transitional period.	Conclusions on IAEA Technical meeting held on 9.9.-12.9.2008	
119.		Ch. 10	New paragraph proposed to be included: The operating organisation should establish and implement a clear strategy for knowledge management and experience retention.	Conclusions on IAEA Technical meeting held on 9.9.-12.9.2008	
120.		Ch. 10	New paragraph proposed to be included: The operating organisation should update safety analysis report to define the safety case relevant to transition period.	Conclusions on IAEA Technical meeting held on 9.9.-12.9.20	For discussion
121.		Ch. 10	New paragraph proposed to be included: The operating organisation should ensure that arrangements for emergency planning and preparedness remain valid for the transitional period.	Conclusions on IAEA Technical meeting held on 9.9.-12.9.2008	

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
122.		Ch. 10	New paragraph proposed to be included: Operating organisation should demonstrate that Fuel management is adequate to the new requirements during transitional period.	Conclusions on IAEA Technical meeting held on 9.9.-12.9.2008	
123.	**ENISS**	Section 9	Section 9 is a compilation of things which haven't been fitted in elsewhere. For instance EQ is a programme which has some relevance to long term operation but is just as relevant to normal lifetime operation. EQ should be moved to "Surveillance programmes" in section 7. The first section on "Management system for Plant Configuration and Status" should be moved to section 8 (as the first section) since it sets the overall management system within which modifications will be managed. Section 9 should then be ordered as: 1. PERIODIC SAFETY REVIEW (from section 6) 2. AGEING MANAGEMENT 3. LONG TERM OPERATION Long term operation should be		For discussion

			COMMENTS BY REVIEWER		RESOLUTION
			the last sub-section because it only applies to situations where the licence specifies a time limit on operation. Many countries do not have such a limit and so long term operation is managed by PSR and Ageing Management programmes. Without a regulatory requirement an LTO programme is simply duplication. Indeed paragraph 9.4 is simply a listing of what a well managed PSR should already be doing.		
			We recognise that decommissioning issues should be considered during design and operation. However, we see a lot of redundancies between this section and WS-R-5. A basic requirement of quality assurance is to avoid writing the same thing in different documents. We suggest changing the title to decommissioning related issues during operation to be in line with the scope in 1.7 because the transition point between operation and decommissioning is not defined the same way in different countries.		For discussion

Safety of Nuclear Power Plants - Operation (DS-413)

COMMENTS BY REVIEWER	*RESOLUTION*

KEY:

CAN = Canada
ENISS = European Nuclear Installation Safety Standards Group
FIN = Finland
FRA = France
HUN = Hungary (Technical Support for the Regulatory Body)
HUN (P) = Hungary (Paks NPP)
IND = India
NETH = Netherlands (Holland)
PAK = Pakistan
SLO = Slovak Republic
SPA = Spain
UK (BE) = United Kingdom (British Energy)
UK (HSE) = United Kingdom (Health $ Safety Executive)

Safety of Nuclear Power Plants - Operation (DS-413)								
COMMENTS BY REVIEWER					*RESOLUTION*			
	Country	*Para/Line No.*	*Proposed new text*	*Reason*	*Accepted*	*Accepted, but modified as follows*	*Rejected*	*Reason for modification/rejection*
1.	**ENISS**	General Comment	The document has been substantially improved since the last version and we express our thanks to the IAEA for the consideration of our previous comments. However, there are still outstanding issues with respect to three groups of topics: ➢ Design authority, modification control and configuration management ➢ PSR, ageing management and LTO ➢ Transition to decommissioning We have found some small new improvements of the text that we offer for more clarity. In addition we reinstate some of our previous comments which have not been fully considered with more justifications taking into account the discussion during the NUSSC May meeting The term "operating organization" is used in a lot of paragraphs and should be defined in the IAEA glossary		*The Operating Organization is defined in the IAEA Safety Glossary. See Para 1.5 of this Document*			

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
2.			Delete sentence like "additional guidance can be found in relevant safety guide"	Safety standard are a top-down approach. Requirements should not refer to guides. This is stated in 1.5 an applicable to the whole document.	***Rejected, there is no harm to refer to the appropriate Safety guide for the recommendations how to fulfill the specific requirement***
3.	**FIN**	General	The requirements of the DS413 Safety of Nuclear Power Plants: Operation are in more detailed level than in the requirements document of the DS415 Governmental and Regulatory Framework for Safety	New safety requirements should be presented at the same level for all of the topics.	***Rejected, the level of details of this Standard was the subject of DPP, approved by NUSSC and the development of the document . The level of detalization has been variated in the process of development of the draft and finally was approved by NUSSC , the Body which is coordinating the development of all IAEA safety Standards***
4.		Title of Safety Standard	Add: Safety of Nuclear Power Plants: <u>Commissioning and</u> Operation	The existing scope covers both commissioning and operation.	***Rejected, the commissioning is the preoperational stage of operations***
5.	**IND**	1.4	For better understanding, the ten fundamental safety principles may be introduced here.	It is necessary for understanding of various safety related requirements stated înDS413.	Rejected
6.		2.1/1	Delete "Complex industrial activities, such as the operation of nuclear installations, usually have associated risks of various types"	Superfluous	Rejected. The second sentence is the link between the industrial activities in general and the activities related to the radiation in particular
7.		3.1 last sentence	may be found in [2]	Clearer guidance	Rejected, [2] is the Requirements in Management and can not be used as a guidance
8.		3.4(4)	support activities which include obtaining, technical and administrative services and facilities necessary to perform the operating functions from both	Confusing sentence	Rejected, the sentence is clear

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		*RESOLUTION*
			on site and off site organizations		
9.	**HUN**	3.6.1	3.6 Rules and responsibilities of the operating organisation shall...	editorial	Rejected, the comment is not clear
10.	**HUN (P)**	3.12	The authorized organization (operating organization or other bodies) shall establish, with the involvement of competent authorities, relations with relevant national and intemational organizations to prepare off-site emergency procedures consistent with national and intemational agreements.	The preparation of the off-site emergency procedures is not always the responsibility of operating organization.	Rejected, the application of the comment is not found
11.	**IND**	3.12/3,,,	A iong-range staffing plan sball be developed to anticipate the future personnel and skill needs of the operating organEation.	For better readability of the sentence "aligned to the long lejm objectives of the operating organization11 is deleted.	Rejected, long term objectives determine the future personnel needs
12.	**ENISS**	3.15 and 3.17	To put 3.17 before 3.15	To clarify; to become more detailed with the requirements in a better sequence.	Rejected, original locations looks rational
13.	**FRA**	3.20/3	Add “and expectations” after “procedures”	Safety culture, and for example questioning attitude, is not only in procedures	Rejected, superfluous
14.	**IND**	3.26/2	Add: The changes and development in technology shall also be appropriately incorporated into training	Additional requirement	Rejected, the focus in this para is on the operational experience

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
			programme.		
15.	**FIN**	3.30 - 3.34	The operating organization shall establish formal and informal mechanisms of communication and venues for discussion with regulatory body for all safety related issues, involving a professional and constructive two way interaction.	Add new requirement to start the set of requirements	Rejected, the communication between the Regulatory Body and the Operator is the legal subject and shall be reflected in the appropriate regulations. Informal communication should be established on the basis of informal discussions with the regulator and should not be formalized in the Requirement form
16.		3.36	New para after 3.36: The extent to which the support functions are self-sufficient or dependent upon services from outside the plant organisation shall be demonstrated by means of functional organisational charts which include personnel allocations and specify the duties and responsibilities of key personnel.	Important addition given todays contractorisation	Rejected, the rationale is not sufficient for new para
17.	**NETH**	4.1, 5th	…… safety culture, including a commitment to excellent performance in all activities impotant to safety and a questioning attitude.	Stronger text from R-2 (2000)	Rejected, addition is no value added, the questioning attitude is only one aspect of safety culture. In the version NS-R-2 the term "safety culture" was completely omitted.
18.	**NETH**	4.2	Now new text but recommendation to transfer this para to Chapter 3 – General.	This requirement is correctly formulated to deal with **whole** operating organisation and not only the operational safety management.	Rejected, still the statement concerns the operational safety policy
19.	**HUN**	4.5	The operating organization	Since this requirement is placed in	Rejected. The main emphasis is the periodic assessment, rephrasing

			COMMENTS BY REVIEWER		RESOLUTION
			shall commit to perform …	the Chapter "Safety Policy" the commitment of the operating organization is place. The requirement for the action itself is fixed in 4.13 following.	does not give more value.
20.		4.5, 4th	……. and/or implemented safety improvements **for adherence with current safety standards**	in accordance with principle of continuous improvement	Rejected. Not always the improvements are undertaken for adherence with safety standards. Sometimes improvements are exceeding current standards.
21.	**SLO**	Para.4.9	New text proposed to be included after last sentence: Operating organisation shall introduce the programme for handling of industry experience from operation.	INSAG 4	Rejected. Industry experience matters are presented in the paras 4.58-4.67
22.	**FIN**	Para 4.10	Appropriate arrangements shall be implemented by the operating organization to ensure that safety related activities are adequately analyzed and controlled to manage the risks to nuclear and radiation safety and health as low as reasonably achievable.	Nuclear and radiation safety should be emphasized	Rejected. For the sake of the consistency in the Safety publications the term "safety" is used as it is defined in the IAEA Safety Glossary
23.	**SLO**	Para.4.12	New text proposed to be included after last sentence: Procedures should include provisions for preparation and evaluation briefings, and proper recording of such activities.	INSAG 13	Rejected. Too detailed for requirements
24.	**SLO**	Para.4.24	Proposal to add new paragraph between 4.24 and 4.25: The Emergency	INSAG 4	Rejected. More comprehensive requirements for the Emergency preparedness can be found in the IAEA Safety Standards GS-R-2 Preparedness and Response for a Nuclear or Radiological

			COMMENTS BY REVIEWER		RESOLUTION
			procedures should include clear responsibility for classification of the emergency situation and consequently rules for information flow within operating organisation and relevant external bodies as well.		Emergency
25.	**UK HSE**	Para 4.25, 1st sentence	This sentence contains the phrase "…, and complete emergency preparedness as described here shall be ensured before the commencement of operation." In NS-R-2 there is a list in Para 2.33 of things that shall be included in the emergency plan. This has now disappeared, and it is probably what the first sentence of Para 4.25 is referring to. Suggest reintroduction of Para 2.33 (NS-R-2)		Rejected. More comprehensive requirements for the Emergency preparedness, including the content of the emergency plan can be found in the IAEA Safety Standards GS-R-2 Preparedness and Response for a Nuclear or Radiological Emergency
26.	**FRA**	4.31	Replace 4.31 by "When developing its emergency plan and procedures, as well as contributing to the development of off-site emergency procedures, the operating organization shall take into account relevant national and international agreements".	Clarify the expectation for the licensee to take onto account relevant national or international agreements.	Rejected. More comprehensive requirements for the Emergency preparedness, including the international aspects can be found in the IAEA Safety Standards GS-R-2 Preparedness and Response for a Nuclear or Radiological Emergency
27.	**UK HSE**	Section 4, Fire Prevention and	The title of this section is not consistent with NS-R-2 or Safety Guide NS-G-2.1. These documents refer to "Fire		Rejected. The fire safety includes fire prevention and protection measures. All fire safety related measures contained in the NS-R-2 are placed in the current draft. The title was changed deliberately to highlight two aspects of fire safety (prevention and protection)

Safety of Nuclear Power Plants - Operation (DS-413)					
			COMMENTS BY REVIEWER		***RESOLUTION***
		Protection	Safety" which covers more than just prevention and protection. Note "fire safety" is used in Para 3.34 and 3.35.		
28.	**NETH**	4.35	before this para additional para: The operating organisation shall have an adequate fire safety management system which includes: • Clearly defined tasks and responsibilities of all staff involved. An adequate qualification, education and training programme for all staff involved.	Top requirements for fire prevention and protection management	Rejected. All aspects of proposal are already included in the text. . Additional para is not value added.
29.	**HUN**	4.36.3	...of fires by simultaneous application ofthe following items:		Rejected. Meaning of the proposal Is not clear. If it is rephrasing, then there is no value added.
30.	**FRA**	4.36 (3)	Add "as well as outage configuration" after "modifications"	Outage configuration is usually increasing fire risk due to numerous maintenance job being performed and additional staff being on site .	Rejected. It seems too detailed for requirements. These details will be discussed in the respective Safety Guides
31.		4.38/2	After "fire" add "especially with respect to ventilation management"	Ventilation management during a fire is an issue with regard to firefighting and radioactive discharge.	Rejected. It seems too detailed for requirements
32.		4.43/1	Add "performance indicators" before "surveillance"	Collective dose, average individual dose… are typical indicators used for benchmarking….	Rejected. Surveillance, inspection and audits are the processes while performance indicators are the results of application of these processes. Details of such processes are subject of respective Guides.
33.	**UK**	Para 4.47	The need for the principle of passive safety in the context of waste storage and conditioning should be stated here.		Rejected. There is strong distinction in the IAEA Safety Standards system between the principles, requirements, guides.
34.	**FRA**	4.50/2	Replace "in order to" by "in	The requirement is limited to	Rejected. The Section is dealing with the radiological aspects

			COMMENTS BY REVIEWER		RESOLUTION
			particular to"	radiological impact. What about other chemical discharges impacts ?	
35.	IND	4.50/2"*	Environment in the vicinity of plant (including the emergency planning area) in order to assess —	Environmental monitoring in the entire eneigy planning area is must.	Rejected. Superfluous
36.		4.50/2	The radiation protection programme shall ensure the availability of enough number of installed and portable radiation monitoring instmments and its periodic calibrations with standard radioactive sources to monitor regularly to keep the radiation exposures as low as reasonably achievable,	Additional Point-4.51	Rejected. Too detailed for the Requirements for operations. More comprehensive set of Requirements for RP are presented in thespecific IAEA Satandards (Radiation Protection). The details of environment monitoring are provided in the respective Guides.
37.		4.50/ZI,d	All the major radiation related operations shall be canied out through* approved procedures. Operations in radioactive areas and with radioactive materials shall be cleared through work permit system by radiation protection personnel. Cases of exposures above the authorized limits shall be investigated and reported to the regulatory body. Radiation protection manual specific to the plant shall be prepared to iake care of the needs of individual plant.	Additional Point-4.52	
38.		4.50/2^	The operating organization	Additional	

			COMMENTS BY REVIEWER		RESOLUTION
			shall establish and implement a programme to the safety of radio active sources. It shall indude updation of inventory, storage, Iransport procedures and integrity checking of sources.	Point 4..53	
39.	**NETH**	4.59, 2nd	……. other plants as well as the results of safety research to derive	Also the result of safety R&D can be relevant	Rejected. This section deals specifically with the lessons to be learned from the operational experience at own plant as well as at the external facilities. The scope of operational experience is well understood in the industry. Inclusion the R&D impose may rouse a confusion..
40.	**NETH**	4.67	additional para (see R-2(2000) para 2.26): Data on operating experience and safety R&D shall be collected and retained for use as input for the management of plant ageing, for the evaluation residual plant life and for the probabilistic safety assessment and periodic safety review.	Important application of operating experience.	Rejected. The applications of OEF even they are important may be subject of the respective guides
41.	**UK HSE**	Para 5.1	Insert a comment. The Design Authority should be involved with drawing up the commissioning programme.		Rejected. The term Design Authority is not used in the IAEA Safety Standards. On the other hand the details of the preparation of the commissioning programme including the parties to be involved are discussed in the respective Safety guide.
42.	**NETH**	5.1, 5th	Addition: …… design assumptions **and complies with the safety requirements**	Self evident	Rejected. In fact the results of the implementation of the commissioning programme should witness the compliance with the design assumptions. Safety requirements by default are included in the design assumptions, so the additional reference to the safety requirements is superfluous.
43.	**UK HSE**	Para 5.3	Suggest inclusion of the principle, which reflects the need for the commissioning		Rejected. The principle is not clear. On the other hand there is distinction between the principles and the Requirements in the system of the IAEA Safety standards.

			COMMENTS BY REVIEWER		RESOLUTION
			programme to ensure a graduated challenge to safety systems.		
44.	**ENISS**	5.4	Add at the end: "However, in the case of a series of identical plants, the commissioning programme may be simplified for the subsequent plants than for the first one".	There will be more and more standardized plants in the future and it is important that the IAEA does not require useless tests in that case.	Rejected.Such the additional information may be confusing. Every single Unit is unique in the sense of the equipment installed at this Unit. So evidence should be obtained that Unit can be operated properly. In addition the "baseline" information is unique for each Unit, for each peace of equipment, even though this is standard equipment. Otherwise the "baseline" information is meaningless.
45.	**FIN**	Para 5.11	Delete: Authorization of the operating organization to start ~~commercial~~ operation shall be conditional on the successful completion of all tests of the commissioning programme.	Commercial operation is normally linked with contractual terms between the vendor and the utility.	Rejected. The commissioning is the initial stage of operation when all operating procedures and approaches are applied. The Unit is connected to the grid at the intermediate power level. The term ' commercial operation" is used to make distinction between the operation during the commissioning stage and the operation at full power after all commissioning programme is over.
46.	**ENISS**	5.11	Authorization ~~of the operating organization to start commercial~~ to enter operation shall be conditional on the successful completion of all tests of the commissioning programme.	The term "commercial operation" refers to contractual arrangement between utility and vendor and is not what is intended here. To be in line with 5.10, operating organization should be deleted	
47.	**UK HSE**	Para 5.13	Suggest adding the words "safety related" after "protect".		Rejected. All equipment should be protected
48.	**HUN (P)**	6.1	The operational limits and conditions shall have the purpose to set the lowest functional capability or performance levels of systems required for safe operation. The	The original statement is rather ambiguous. The operating limits and conditions cannot prevent accidents. Transients and accidents do occur even in the case when the plant is properly operated	Rejected. The main idea of the text is correct. The text is slightly modified for giving more focus on the maintaining established OL&C during the operation of NPP.

			COMMENTS BY REVIEWER		RESOLUTION
			operational limits and conditions shall also be established for a process variable, design feature, or operating restriction that is an initial or boundary condition of a design basis accident or transient analysis.	within the domain set by the operational limits and conditions. (Of course, if the plant operated beyond the operational limits then the probability of certain accidents could be higher.) The operational limits and conditions have the purpose to ensure that any design basis accident had less severe consequences that were documented in the FSAR. We suggest that the purpose of the OLC would be formulated with the proposed content.	
49.	**FIN**	Para 6.1 line 2	Add: …..preventing situations which could lead to <u>incidents or</u> accidents~~;~~ and limiting the consequences of any such <u>incidents and</u> accidents, if they do occur.	Incidents should be covered, too.	Rejected. The term "incidents" is not used in the Safety Standards. See the IAEA Safety Glossary
50.	**SWISS**	Between 6.4. & 6.5.	The OLC shall be user friendly and written in a clear, unambiguous and consistent language, so that they can be understood correctly by all user categories.	This and the next comment should also be applied to Operating Procedures (next chapter)	Rejected. The manner in which the OLC should be presented is more appropriate for the Safety Guide.
51.	**UK HSE**	Para 6.6	Reference to IAEA Guidance NS-G-2.2, and some of NII's recent work on the		Rejected. It is not usual to refer in the Requirements to the Safety Guide

		COMMENTS BY REVIEWER			RESOLUTION
			benchmarking of Ors may be helpful. For example, it should be axiomatic that Operating Limits and Conditions should be capable of being complied with.		
52.	**SWISS**	Between 6.8. & 6.9.	A systematic process for modification, verification and validation of the OLCs shall be in place which ensures that the OLCs are always up-to-date, correct and user friendly.		Rejected. The proposed modification is overlapping what is already said in the para. 6.8
53.	**UK BE**	Para 6.9, 2nd sentence	Suggest joining it to the first sentence.		Rejected. The logic of sequence is justified. First to cope with the event, afterwards to report.
54.	**HUN (P)**	6.12	In order to prepare, review and optimize the operating conditions, consideration shall be given to the use of probabilistic safety assessment (PSA) to provide insight into the relative contributions of these conditions to safety of the plant	We suggest to simplify the sentence this way.	See above
55.	**FRA**	6.13/1	Before "under controlled", add "within the management system"	This is part of the licensee management system	Rejected. Superefluous
56.	**NETH**	6.24, 2nd	No new text. Unclear sentence: 'they shall be made permanent indications'. Propose to delete 2nd sentence	Clarity	Rejected. The "indications" will be replaced by "features"

Safety of Nuclear Power Plants - Operation (DS-413)					
		COMMENTS BY REVIEWER			*RESOLUTION*
57.	**NETH**	6.26, last sentence	delete	Too much isolated requirement and covered by broader requirements	
58.	**UK HSE**	Para 6.30	Suggest inclusion of material ageing.		Rejected. Material conditions and housekeeping are currently well defined and understood items. The equipment ageing is the separate item and is discussed in the Section 9.
59.	**SLO**	Para.6.50	New text proposed to be included : …in accordance with *national and/or international* regulations…….	IAEA Regulations are not obligatory for operators	Rejected. The reference to the specific IAEA Standards ensures their compatibility. The status of the IAEA Standards and their applicability is explained in the Forward of DG in all IAEA Safety Standards publications
60.	**IND**	7.8	7.8(A) The operating organization shall maintain up to date history records of equipments important to safety	Additional Important safety requirement	Rejected. The scope of the para is different. The requirements for the records are in the paras 4.54-4.57. For the maintenance records detailed guidance are provided in the respective Safety Guide
61.	**NETH**	after 7.11	new para: Following any abnormal event, the operating organisation shall revalidate the safety functions and functional integrity of any component or system which may have been challenged by the event. Necessary remedial actions shall include inspection, testing and maintenance as appropriate		Rejected. See para 4.9
62.		7.14	The work control system shall be in use also for the protection ……	Better formulation	Rejected. No value addedd
63.		7.16	The system for documenting and minimizing of temporary deviations from normal shall be clearly established	More complete and clearer formulation	Rejected. The particular subject of this para is the establishing of the system for documentation of temporary deviations.

Safety of Nuclear Power Plants - Operation (DS-413)

			COMMENTS BY REVIEWER		RESOLUTION
64.	NETH	9.7, 9.8	Last line 9.7: ……. Shall be periodically reviewed [2],[7] delete 9.8	Missing word	Rejected. Last line is deleted .Comment two lines above
65.		10.4	... Industrial safety should be maintained after removal of nuclear fuel, with special attention to remaining sources of ionising radiation (radioactive waste, activated structures and components		Rejected. This section is dedicated to the transition to the decommissioning assuming the fuel in the4 core.
66.	SWISS	10	A statement about the necessity to maintain a good safety culture should be added.		Rejected. Superfluous

KEY:

CAN = Canada
ENISS = European Nuclear Installation Safety Standards Group
FIN = Finland
FRA = France
HUN = Hungary (Technical Support for the Regulatory Body)
HUN (P) = Hungary (Paks NPP)
IND = India
NETH = Netherlands (Holland)
PAK = Pakistan
SLO = Slovak Republic
SPA = Spain
UK (BE) = United Kingdom (British Energy)
UK (HSE) = United Kingdom (Health $ Safety Executive)