DS442 Regulatory Control of Radioactive Discharges to the Environment

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Page 1 of 7 Country/Organization: Japan/Nuclear Regulation Authority (NRA) Date: 11 Nov. 2014							
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	General	Change “BSS” to “GSR Part3”	Editorial				
2	General	Make use of "facility" and "installation" clear.	Similar terms “facility” and “installations” are used together in this document. However the intent of usage of both terms is unclear.	Yes			
3	General	Format of citation of other Safety Standards should be consisted among Safety Guides (DS442, DS432, DS427).	Clarification. Examples would be found in other Safety Guides such as SSG-23 (Section3) and SSG-29 (Section 3 to 7.)	Yes			
4	General	Paragraph consisted of short statement should be consolidated with an appropriate paragraph. For example paras.1.3, 1.6 and 5.56.	To avoid unnecessary partitioning.	Yes			
5	1.6/2	Members of the public may be exposed to radiation as a result of such discharges to the environment~~al media~~.	Unification of wording. for example 1.10/L2	Yes			
6	2.1	Delete this paragraph.	The content of Section2 has been described in para.1.15. In addition, there is no additional information comparing with para.1.15. (In the case of para.3.1, more information is mentioned in the last text.)	Yes			
7	2.7/2	The establishment of discharge limits for facilities and activities, as described in this Safety Guide, is based on the optimization of the protection of members of the public ~~only~~ (e.g the endpoints of the assessment to define discharge limits is dose to the representative person).	This text is deemed to conflict with GSR Part3. GSR Part3 mentions “These operational limits and conditions: (e) Shall take into account the results of the prospective assessment for radiological environmental impacts that is undertaken in accordance with requirements of the regulatory body.” See para.2.18 of this document.	Yes No	Only will be deleted		A prospective assessment for radiological environmental impacts is that

							described in DS427. To establish discharge limits the results of such an assessment must be considered (you can include in this assessment flora and fauna), but the optimization of the protection, as defined by ICRP and incorporated in the IAEA Safety Standards (optimization is the basis for the establishment of discharge limits) is only possible to apply to humans protection. This will be discussed in WASSC/RASSC meeting

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8	2.7/3	(e.g the endpoints of the assessment to define discharge limits is dose to the representative person[6]) 6 GSR Part 3 define representative person as: An individual receiving a dose that is representative of the doses to the more highly exposed individuals in the population. The dose to the representative person is the equivalent of, and replaces, the mean dose in the 'critical group'. The concept of critical group remains valid.	Clarification This foot note is same as the no. 13 foot note of DS427.	Yes			
9	2.7/5	This approach assumes that the environment is protected by mean of the conditions resulting in the authorization for the practice[76]. 76~~6~~ Some States may consider more explicitly the protection of the environment, for instance including in the assessments the estimations of radiation exposures to flora and fauna. This may be considered necessary in some environmental circumstances needing special consideration (such as in protected areas or where there are endangered species). However, in general the protection of flora and fauna is not the primary ~~limiting~~ factor in setting discharge authorizations. Ref. [6] discusses protection of the environment, in the framework of radiological environmental impact assessment, with more detail.	Same as Comment No. 7.	Yes			Please, see Resolution to Comment No 7.

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Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
10	2.9/1	Paragraphs 2.8 ~~and 2.9~~ of the GSR Part~~BSS~~3 [2] state…	Editorial However this comment is based on the current format of citation. See Comment No.3.	Yes			
11	2.13/5	(paragraphs 3.119 and 3.120 ~~in the BSS [2]~~)	Editorial The subject of this text is "the BSS". Hence, this phrase is duplicated. However, Format of citation of paragraph number should be aligned among Safety Guides (DS442, DS432, DS427). See Comment No.3.	Yes			
12	2.16	Add paragraph number (para 3.126) to this paragraph.	Clarification	Yes			
13	2.17/(c)	(c) Shall assess doses to the representative person[7] due to the planned discharges; ~~7 In relation to the control of radioactive discharges the representative person can be considered to be the same as the previous concept of the critical group and similar methods can be used to assess doses to the representative person that were used previously for the critical group.~~	This foot note is moved to para 2.7. See comment No.8.	Yes			
14	2.18/(e)	(e) Shall take into account the results of the prospective assessment for ~~of the potential~~ radiological environmental impacts that is undertaken in accordance with ~~national~~ requirements of the regulatory body.	Correct citation of GSR Part3.	Yes	This was the text in the interring version of GSR Part 3. Now must be changed.		
15	2.22/2nd from the bottom	…by the regulatory body ~~[…]~~ of authorized limits…	This part shows omission, hence the square bracket is not necessary.	Yes			

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16	3.1/3	…those of justification, optimization ~~dose limitation~~ and dose limitation ~~optimization~~	The order of 3 principles is justification, optimization and dose limitation.				
17	Dose limitation 3.4	Sub-section "Dose limitation" should be moved to after "Optimization".	See above comment.	Yes	Will be considered and revised. The order proposed in the comment is correct, but in the setting of discharge limits the logic is: You start from a dose limit, then a dose constraint, and then you optimize below the dose constraint.		
18	3.4(a) Footnote 10	(a) An effective dose of 1 mSv in a year[10]; (b) In special circumstances[10], a higher value of effective dose in a single year could apply, provided that the average effective dose over five consecutive years does not exceed 1 mSv per year; (c~~b~~) An equivalent dose to the lens of the eye of 15 mSv in a year; (d~~c~~) An equivalent dose to the skin of 50 mSv in a year. 10 ~~In special circumstances a higher value of effective dose in a single year could be permitted provided that the average effective dose over five consecutive years does not exceed 1 mSv per year.~~ For example, in authorized, justified and planned operational conditions that lead to	Correct citation of GSR Part3.	Yes			

		transitory increases in exposures.					
19	3.5/2 (p.12)	.., economic and social factors being taken into account" [2~~1~~], should be applied ..	The definition of "optimization of protection and safety" is found not in SF-1 but in Glossary in GSR Part3.	Yes			

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20	5.5/4	Ref.[6] provides guidance for…	Editorial	Yes			
21	5.21/L2	The dose constraint should be expressed in terms of annual effective dose and ~~therefore~~ should be set at some fraction of the effective dose limit of 1 mSv in a year.	Clarification	Yes			
22	5.29	The range of dose constraint should be added to this paragraph.	Consistency DS432 (para.3.38) mentions "dose constraints are likely to fall within the range of 0.1 - 1 mSv." DS427 (para.5.36) metions "Dose constraints should fall within the range of 0.1 - 1 mSv."	Yes			This will be discussed during next WASSC/RASSC/NUSSC meetings.
23	5.29/2 from the bottom	What is the evidence for the value of 800μSv?	Clarification and confirmation. This value emerges from this draft. Some evidence should be shown to clarify the fact.	Yes	This was a proposal during drafting by international experts. It will be explained during meeting.		This will be discussed during next WASSC/RASSC/NUSSC meetings.
24	5.73-5.74	Regarding authorized limit, it should be clarified whether this limit means statutory value or specified value of each operator.	Clarification	Yes			
25	5.73/3	These should take account of the radiological environmental impact assessment in accordance with requirements of the regulatory body and …	This text is deemed to conflict with GSR Part3. GSR Part3 mentions "These operational limits and conditions: (e) Shall take into account the results of the prospective assessment for radiological environmental impacts that is undertaken in accordance with requirements of the regulatory body." See para.2.18 of this	Yes			This will be discussed during next WASSC/RASSC/NUSSC meetings.

			document.				

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26	5.73/7	…for discharge for simple~~ less complex~~ facilities such as hospitals or small laboratories …	Consistent with para.5.3 and 5.14.	Yes			
27	5.80/3	For example, airborne discharges from nuclear facilities ~~plants~~ are often grouped as follows	Clarification	Yes			
28	5.83	The operator should take provisions to report promptly to the regulatory body any releases exceeding any reporting levels or authorized discharge limits in accordance with criteria specified in the discharge authorization issued by the regulatory body.	This guidance is incomplete. See para.4.1 of WS-G-2.3.	Yes			
29	Figure4 (p.32)	The line of "Exemption Level" should be drawn not as a single line but as a band. *Exemption level (order of 10μSv/a)* *Margin to allow for doses due to regional and global sources ~~and for the exempted sources~~* The text "the optimized discharge should give rise to doses with this range" should put beside the dotted line pointing to "dose constraint."	Dose criteria "10μSv/a" for exemption is not a single value but it expresses "order of 10μSv/a." Exemption should not be included in this area. Clarification	Yes			
30	5.95	Add Ref. [8] to this paragraph.	Two general types of monitoring are addressed in RS-G-1.8.	Yes			
31	5.113/2 (p.37)	…(see Refs. [11] and [2]).	Editorial	Yes			
32	5.116/1	As noted in paragraph 2.~~9~~20…	Although para.2.9 mentions justification, para.2.20 mentions transboundary impacts.	Yes			

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33	5.117-5.119	Some heading for these three paragraphs should be added such as; Amendment, renewal, suspension or revocation of an authorization.	The contents of these paragraphs are not relevant to involvement of interested parties.	Yes			
34	6.1/6	…the activity concentration of ^{40}K is greater than 10 Bq/g the airborne and/or liquid discharges from the facilities…	In para. 1.11 the scope is limited to airborne and liquid, but 1Bq/g or 10Bq/g is clearance level for solid materials.		To be considered		
35	6.2/1	Add some examples of NORM facilities to this paragraph or formulate a footnote of NORM facilities.	There is no definition of NORM facilities, hence some explanation including examples is useful to understand this term.	Yes			
36	7.1(a), (b)/1	Permanent ~~S~~shutdown…	Wording	Yes			
37	7.2/2	Deferred ~~Postponement of~~ dismantling will allow time…	Wording See GSR Part6.	Yes			
38	7.3/1	The anticipated discharge levels following permanent shutdown of a facility	Wording	Yes			
39	7.5/2	Add following text to after the first text or elsewhere. "It is typical for effluent discharges to vary though the different phases of decommissioning. For example, as decommissioning leads to a progressive removal of radiological hazards, the radioactive discharges may be reduced."	Proposed text is derived from para.8.19 of DS452. This description is also important. Consistency and coordination with DS452 would be required.	Yes	Also that at some points during decommissioning releases may increase during short time periods will be added.		