

DS457

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Page.... of.... Country/Organization: Japan Health Physics Society (JHPS) Date: 30 September 2013							
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
General comment 1		Safety requirement on "Countermeasures taken in existing exposure situation" should be separately discussed and prepared as GSR-Part 8.	Draft DS457 for GSR Part 7 only treats preparedness and response for an emergency exposure situation and subsequent transition to an existing exposure situation. Although GSR Part 3 treats an existing exposure situation in its Chapter5, a specific document on safety requirement for existing exposure situation should be separately discussed on the basis of lessons learned from the Fukushima nuclear accident, and prepared as GSR-Part8 to complete the IAEA Safety Standards.				
General comment 2		The concept of "intervention levels" developed by the process-based approach in ICRP 1990 Recommendations and that of "reference levels" developed by the situation-based approach in ICRP 2007 Recommendations are different, although the numerical values itself are the same. Care should be taken to this, and each should be distinctively used in the DS457.	Generic criteria given in Table II.2, 3, 4, 5 are mainly provided by the concept of intervention above which some action should be taken, while the generic criteria for the transition to an existing exposure situation (i.e., an effective dose of 20 mSv per annum) are provided by the concept of reference level as a target dose when some action is taken.				
Specific comment 1	Page 6, line 7	(c) To avoid or minimize prevent severe deterministic effects;	The goal of emergency response is to prevent severe				

			deterministic effects. ICRP Pub.103 says “(29) The Commission’s system of radiological protection aims primarily to protect human health. Its health objectives are relatively straightforward: to manage and control exposures to ionising radiation so that deterministic effects are prevented, and the risks of stochastic effects are reduced to the extent reasonably achievable.”				
Specific comment 2	Page 31, line 19-24	5.94. Arrangements shall be made for providing useful, timely, truthful, consistent, clear and appropriate information to the public in a nuclear or radiological emergency, with account taken that the usual capabilities for communication might have been damaged as consequence of the emergency or its initiating event (e.g. by an earthquake, flooding, etc.) or overburdened by public use. These arrangements shall include arrangements for keeping the international community informed, as appropriate. <u>In addition, arrangements shall be also made during the normal condition for encouraging the spread of knowledge on radiation protection so that the people can understand the meanings of countermeasures taken in the nuclear or radiological emergency.</u>	One of the key lessons learned after the Fukushima nuclear accident was that the people could not appropriately act even if they could obtain various quantity of information. This is because the people don’t have enough opportunity to learn the knowledge on radiation protection during the normal condition. In fact, many concerns such that there were no specific radiation protection criteria for children and pregnant women were raised following the Fukushima nuclear accident.				
Specific comment 3	Page 38, line 1-13	5.136. The government shall ensure that, as part of its emergency preparedness, arrangements are in place for the transition from an emergency exposure situation to an existing exposure situation. These arrangements shall involve interested parties. The arrangements shall take into account that the administrative decision for the transition from an emergency exposure	It is important to emphasize that the generic criteria given in Appendix II are the default values (not rigid), and national criteria to be practically implemented should be decided in consideration of the situation of nuclear and radiological emergency.				

		<p>situation to an existing exposure situation might be taken at different times in different geographical areas. The planning process shall include: the roles and functions of organizations; methods of transferring information; methods for assessing radiological consequences and non-radiological consequences; ensuring consistent system of national generic criteria to be applied from the start of the emergency until the emergency phase is terminated (see Appendix II); review of the hazard assessment; establishment of national guidelines for termination of an emergency phase by returning to a planned exposure situation or by transition to an existing exposure situation, as appropriate, e.g. by adjusting protective actions and other response actions; and arrangements for on-going public communications, monitoring public opinion and the response of the news and information media. <u>It should be noted that the generic criteria given in Appendix II are the default values, and national criteria to be practically implemented should be decided with flexibility in consideration of the situation of nuclear and radiological emergency.</u></p>					
Specific comment 4	Page 38, line 14-17	<p>5.137. After a decision has been made on the termination of the emergency phase by either returning to a planned exposure situation or by transition to an existing exposure situation, <u>radiation monitoring system</u> (individual monitoring and environmental monitoring), health surveillance <u>strategy, and transmission of practical knowledge within the population about the control of the radiological situation to current and future generations</u> shall be conducted <u>established</u> subject to the requirements for planned exposure situation or existing exposure situation, as appropriate [14].</p>	<p>Past experiences including the Fukushima nuclear accident show that authorities have to set up infrastructures to support the implementation of all protection strategies, including self-help strategies implemented by the affected population. The dissemination of a ‘practical radiological protection culture’ within all segments of the population, and especially within professionals in charge of public health and education, is also an important element of</p>				

			the strategy. Experience has shown that the development of such an infrastructure is based on three key pillars: radiation monitoring system, health surveillance strategy, and transmission of practical knowledge (ICRP pub.111, para.62).				
Specific comment 5	Page 50, line 12-13	II.2. These generic criteria are generically optimized for taking appropriate protective actions and other response actions in a nuclear or radiological emergency. <u>Note that these generic criteria are the default values, and national criteria to be practically implemented should be decided with flexibility in consideration of the situation of nuclear and radiological emergency.</u>	It is important to emphasize that the generic criteria are the default values (not rigid), and national criteria to be practically implemented should be decided in consideration of the situation of nuclear and radiological emergency.				
Specific comment 6	Page 50, line 28-32	(c) <u>'Safe-Below levels of health concern'</u> when the generic criteria in Table II.1 and Table II.2 are not projected or received, since no protective actions and other response actions are justified from the radiological point of view to reduce the risk of stochastic effects or to <u>minimize-prevent</u> severe deterministic effects as there will be neither observable increase in incidence of cancer nor any severe deterministic effect.	The generic criteria should not be used to explain the distinction between "safe" and "unsafe" to the public, on the basis of the experience after the Fukushima nuclear accident. The generic criteria are the levels below which no radiological countermeasures are justified and no public health concerns are considered. Following the Fukushima nuclear accident, the word "safe" has been often used when they refer to radiation protection criteria associated with the stochastic effect. Unfortunately, however, this approach often made the general public misunderstand that the criteria mean the distinction between safety and danger. On the basis of our				

	<p>Table II. 3</p> <p>OTHER COMMODITIES TO REDUCE THE RISK OF STOCHASTIC EFFECTS <u>AND TO PREVENT THE INCIDENCE OF THYROID CANCER</u> IN AN EMERGENCY</p> <p>(To add) Generic criteria <u>H_{Thyroid}: 50 mSv per annum</u></p> <p>Table II. 4</p> <p>Table II.4. GENERIC CRITERIA FOR VEHICLES, EQUIPMENT AND OTHER ITEMS TO REDUCE THE RISK OF STOCHASTIC EFFECTS <u>AND TO PREVENT THE INCIDENCE OF THYROID CANCER</u> IN AN EMERGENCY</p> <p>(To add) Generic criteria <u>H_{Thyroid}: 50 mSv per annum</u></p>						
Specific comment 8	Page 59, line 6-9	II.19. Exceeding the generic criteria in Table II.5 does not mean that the commodities and food are unsafe in terms of the radiation induced health effects (see para. II.4). Commodities and food are to be considered unsafe in terms of the radiation induced health effects (see para. II.5) only if the generic criteria in Table II.1 or II.2 are projected to be exceeded.	From the viewpoint of the specific comment 6, this sentence referring to the distinction of safe and unsafe should be deleted or the word “unsafe” should be replaced to another phrase.				
Specific comment 9	Page 61, line 3-18	<u>II.24. The decision to terminate the emergency phase and the concurrent transition to an existing exposure situation shall be taken after: (a) confirmation that the source of exposure is fully characterized for all members of the public living normally in the area who may be exposed to radiation in wide distribution of annual individual doses ranging from the very low to several tens of mSv *1; (b) the exposure situation is understood and remains stable; (c) any restrictions on normal living.</u>	It should be noted that existing exposure situations generally give rise to wide distribution of annual individual doses ranging from the very low to, in rare cases, several tens of mSv (ICRP pub. 103, para. 285). A target dose of an effective dose of 20 mSv per annum should be appropriately used as a reference level in				

		<p><u>conditions are limited and provisions are in place to confirm compliance with such restrictions; and (d) ensuring that interested parties including members of the public are consulted and kept informed about the basis for the adjustment and transition placing the associated health hazards in perspective.</u></p> <p><u>*1 With due consideration and verification of the fulfilment of conditions set in para. II.24, reference levels, set in terms of individual annual effective residual dose (mSv/y), shall be used in conjunction with the planning and implementation of the optimization process for exposures in existing exposure situations. The appropriate reference levels shall be chosen in the annual effective dose of 1-20 mSv per annum band.</u></p>	<p>accordance with the ICRP 2007 Recommendations, and the application after the transition should be provided as a footnote. In existing exposure situations, reference levels should be used in conjunction with the implementation of the optimization process for exposures in existing exposure situations (ICRP pub. 103, para.286), and the appropriate reference levels should be chosen in the 1–20 mSv band proposed by ICRP (ICRP pub.111, para.48).</p>				
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