

My comments are listed below along with the relevant line numbers in the text.

1) Lines 52, 116-117 and 827-828: It is better to delete the phrase “or below” written in “within or below the Commission’s recommended 1-20 mSv band”, because setting the reference level below the band, i.e. below 1 mSv is too low for the recovery stage.

2) Line 83: The phrase “exposure due to inhalation or ingestion” is better to be modified as “exposure due to inhalation and ingestion” because both exposure pathways will contribute the exposure to thyroid rather than only one pathway.

3) Lines 84-85: It is better to add “preferably within a week after the iodine release” after the sentence “radioiodine levels in the thyroid should be monitored, particularly in children and pregnant women.” to explain the right measurement timing.

4) Lines 188, 594, 1599, 2548 and others: The term “radiological criterion” is not consistently used. Most cases use the expression of “radiological criterion”. However some cases use “radiological protection criterion” in lines 594, 1609 and 1654, “radiation protection criterion” in lines 1599 and 1603, and “radiation criterion” in lines 2548 and 2554. It is better to fix the term as one of them.

5) Lines 486-490: Paragraph (44) only explains pessimistic aspect that the dose limit cannot be applied in the case of emergency. This explanation could not persuade the people who insist to use dose limit even in the case of emergency. Therefore, it might be better to explain more with the cost-benefit viewpoint as well such as following, although it needs to refine the following expression. “In the planned exposure situations the exposure will result from the activities that produce benefit and the necessary cost to reduce the exposure derives only from the measures for radiation protection. On the contrary in the case of emergency situations taking evacuation as an example we have to consider the cost or risk due to not only exposure but also social and economic disruption to make the decision to choose the right protective action. Therefore in the case of emergency exposure situations we have to take into account other additional factors beside the exposure.”

6) Lines 758-759: The phrase “the range between the highest and lowest individual exposures is reduced” in the sentence “The objective is to ensure that when implementing protective actions, the range between the highest and lowest individual exposures is reduced,” should not be the objective of protection. Main objective of protection should reduce the highest dose to be lower than the reference level. The range itself is not necessarily its objective of protection as explained below in my comment 7).

7) Line 776: The phrase “the dose distribution will be very narrow” is not necessarily important. The lowest range of dose distribution among the affected population group will not generally be zero. The lowest dose among the group could decrease more than the highest dose when some protection action is implemented.

8) Line 790: The dose distribution curves shown in Fig. 2.3 is better to be modified because the lowest range of dose distribution among the affected population group will not always be zero. Therefore, the

curve of the dose distributions in the upper two figures at least should be modified not to start from zero.

9) Line 835: The phrase “on the order of 100 mSv” is better to be the same as “on the order of ≥ 100 mSv” shown in the line 324.

10) Lines 1043-44: Timing shown in the phrase “in the first few hours” is too short even for the evacuees from the areas where OIL1 was exceeded. GSG-2 of the IAEA recommends that the area more than OIL1 should be identified within hours. The evacuation will be implemented after the decision based on the measurements so that the initial screening measurements could not be possible to conduct within the first few hours.

11) Lines 1045-1047: The sentence “Subsequently, more accurate measurements can be made with transportable in-vivo monitoring devices, such as whole-body counters and thyroid monitors.” is better to be rephrased especially because thyroid monitors could not be used for accurate measurements on the day of inhalation of radioactive iodine. It is because it takes some time to accumulate iodine in the thyroid gland after its inhalation.

12) 1050: As explained in my comment 11) the phrase “in the early phase” in the sentence “Thyroid dose monitoring in the early phase is important for children and pregnant women.” is better to be modified to exclude the day of inhalation.

13) Lines 1057-58: As explained in my comments 11) and 12) the phrase “ideally as soon as practical after exposure” in the sentence “Given the 8-day half-life of iodine-131, it is important to make such measurements within a few weeks of exposure, ideally as soon as practical after exposure.” is better to be modified to exclude the day of inhalation.

14) Line 1059: The phrase “organ dose.” might be better to modified as “organ dose (thyroid equivalent dose).”

15) Line 1071-1073: It is better to add “with the care of privacy.” at the end of the sentence “For the sake of accountability and transparency, the Commission recommends that this information should also be made available to members of the public, accompanied by clear explanations”, because individual dose records should be carefully handled not to lose privacy.

16) Lines 1357-1358: The meaning of “other than cancer” in the sentence “Adverse effects of potassium iodine on thyroid function are more common in individuals with pre-existing thyroid disorders other than cancer.” is hard to understand with my poor command of English.

17) Lines 1421-1422: The exchange of foodstuffs inside and outside affected areas explained in the sentence “The radiological monitoring of foodstuffs, based on these criteria, is key to facilitate their exchange inside and outside affected areas, while guaranteeing protection of the people.” is not possible in Japan. Once the foodstuffs produced in the affected area are higher than normal level the people who live outside the affected area will not willing to exchange them with their normal foodstuffs. Therefore, the monitoring foodstuffs is not key to facilitate their exchange. Please

rephrase the sentence without “key”.

18) Lines 1534-1536 and 1576-1578: The same sentence “Due to the relatively short timescales involved, the lifting of sheltering is likely to be carried out without significant involvement of stakeholders, although a mechanism for communicating with those who are sheltered is essential.” appears twice in the same chapter of 3.5.1. Is it necessary to keep both sentences in the same chapter?

19) Lines 1859-1863: Regarding the sentence “Experience shows that the pluralism of organisations involved in implementation of the radiation monitoring system (authorities, expert bodies, local and national laboratories, non-governmental organisations, private institutes, universities, local stakeholders, nuclear operators, etc.) is an important factor in favour of confidence in the measurements among the affected population.” it is important to have many organization involved in the monitoring. However, large discrepancies might be found in some cases. For this reason following sentence is better to be inserted after the sentence, i.e., “However a certain mechanism should be prepared in advance to harmonize their measurement results once there is large discrepancy among them.”

20) Line 1930-1932: Regarding the phrase “100-500 mGy” in the sentence “In this regard, a long-term thyroid health monitoring programme should only be conducted for those individuals exposed in utero or during childhood or adolescence with 100–500 mGy absorbed dose to the thyroid.” is better to be replaced with “50-500 mGy” since GS-G-2.1 of the IAEA shows many tens of thousands of children to thyroid doses of the order of 50 mSv could result in a detectable increase in the incidence of cancer among those population groups exposed.

21) Lines 2008 and 2010: “Radioactivity” in the phrases of “• orient themselves in relation to radioactivity in everyday life by understanding where, when, and how they are exposed;” and “• build their own benchmarks about radioactivity;” is better to be change to “radiation” because radiation has more wide meaning than radioactivity.