Dr Jing Chen
Chairperson, UNSCEAR
UNSCEAR secretariat
Vienna International Centre
Wagramer Straße 5
P.O. Box 500
Building E
A-1400 Vienna, AUSTRIA

Dear Dr Chen

12 July 2022

Subject: Letter to UNSCEAR Chairperson with respect to Figures A-9. VII and VIII

This is my third letter to you with respect to Attachment A-9.

I show below excerpts from Paragraphs 12, 13, and 14 of this Attachment:

From 12: It can be seen from figure A-9.VI that there are significant differences in the performance of the ATDM depending on the location: while the modelled deposition densities match the measurements quite well along the coast (indicated by green colours; especially visible for ^{131}I), the model underestimate deposition densities to the north-west of FDNPS, in the area of Fukushima City, in the Nakadori valley and in the western parts of Fukushima Prefecture.

From 13: The Committee has used two different methods to estimate concentrations of radionuclides in air for the purposes of assessing doses to the public. The first method was based solely on the results of the ATDM provided by Terada et al. [Terada et al., 2020]. This approach was used for estimating air concentrations in areas of Fukushima Prefecture that were evacuated, because, when estimating doses to those members of the public who were evacuated, information was needed on the concentration of radionuclides in the air as a function of time.

From 14: The second method was based on the estimated time-integrated concentrations in air derived from the measured deposition densities of radionuclides by dividing by the

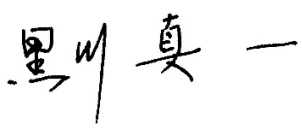
ratio (the "bulk deposition velocity") of the deposition density to the time-integrated concentration in air estimated from the ATDM results as a function of location.

These sentences can be summarized as follows. UNSCEAR uses two different methods for evaluating time-integrated concentration of ^{137}Cs or ^{131}I in Fukushima: the first for evacuated areas and the second for non-evacuated areas. I strongly suspect that Figures A-9. VII and VIII, which cover both evacuated and non-evacuated areas, are created by using the second method that should be applied only for non-evacuated areas.

I understand that Figure A-9. I, II, III, and IV show the time-integrated concentrations in air for ^{131}I, ^{132}Te, ^{134}Cs, and ^{137}Cs calculated by ATDM without using measured deposition densities. I think, however, that these Figures cover too large areas to get relevant information from them; therefore, I would request you that UNSCEAR provide me of (1) the Figures of time-integrated concentration in air of ^{137}Cs and ^{131}I in the evacuated areas in Fukushima that are made by using the first method with the same spatial resolution and the same colour for each level of concentration as Figure A-9. VII and VIII, and (2) the intermediate data including time-integrated concentrations, deposition densities, and bulk deposition velocities. Without these Figures and the intermediate data I cannot verify whether UNSCEAR correctly estimated the doses in the evacuated areas.

I am grateful if you and UNSCEAR respond to my request at your earliest convenience.

Sincerely yours,



Shin-ichi Kurokawa

Professor Emeritus
High Energy Accelerator Research Organization, KEK, Tsukuba, Japan