Correction to: Global Radioxenon Emission Inventory from Nuclear Power Plants for the Calendar Year 2014

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For the NPPs of the Republic of Korea, the release rates of all four radioxenon isotopes need to be corrected.

Below is the corrected Fig. 10, and the corrected text describing it. The updated values of the Korean NNPs are marked in red in the “NPP Releases for

publication SupplementaryMaterial_corrected_28062021”.

In addition of the above mentioned nuclear power plants, the published data are available for Korean nuclear power plants for the year 2014 (Tae Young Kong et. al., 2017). The data include total activity ($8.86\text{E} + 10$ Bq/day adding up the data of all four NPPs) of argon, krypton and xenon from four NPPs, as illustrated in Fig. 10. It is clearly seen that the total estimated ^{133}Xe activities alone ($1.76\text{E} + 11$ Bq/day

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Figure 10

Comparison of the estimated ^{133}Xe and releases of total radioactive noble gases (argon, krypton and xenon) from Korean NPPs in Bq/day

for all four NPPs together) is about a factor of two higher than the total reported noble gases activities of these four NPPs. Obviously, these reactors have put retention technologies in place that allow short-lived noble gas isotopes to decay before the gas is released to the atmosphere. A conservative estimate for the release from the Korean NPPs was made by assuming that the four radioxenon isotopes sum up to the reported total noble gas emissions, where the share of each radioxenon isotope is determined according to the isotopic ratios of the best estimate given by Kalinowski/Tuma (2009).

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