Journal of the Society for Remediation of Radioactive Contamination in the Environment Vol. 11, No. 1, pp.15-23 (2023)

Research Note

Confirmation of the Sustainability of Decontamination Effects in Public Facilities and Prediction of Future Air Dose Rates

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● **Summary** ● The spread of radioactive materials caused by the Fukushima Daiichi Nuclear Power Plant accident that occurred in March 2011 contaminated a wide area that includes Fukushima Prefecture. Although air dose rates in Fukushima Prefecture have been steadily decreasing because of decontamination and the physical decay of radioactive materials, it is important to confirm the sustainability of decontamination effects in living areas and to predict future trends in air dose rates to reassure residents who are concerned regarding radiation exposure. This report aims to confirm the sustainability of the decontamination effects in public facilities after decontamination on a continuous and detailed basis, and to verify whether the future transition in air dose rates can be predicted using existing model. The air dose rates at public facilities in Kawamata Town, Fukushima Prefecture after decontamination were measured via fixed-point and walking surveys, and the changes in air dose rates were clarified quantitatively for each facility from 2017 to 2021. The measured values were compared with values obtained using existing model (Kinase, 2015), and prediction accuracy was considered. The results showed that there was no evident recontamination after decontamination at any of the surveyed facilities, indicating that the decontamination effects were sustained. It was also confirmed that future trends in air dose rates at the facilities after decontamination could be accurately predicted by the mentioned model.

Key words: air dose rate, decontamination, future prediction, public facilities

Received August 2, 2022; Accepted November 24, 2022

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