< Reference >
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Tokyo Electric Power Company

The Estimated Amount of Radioactive Materials Released into the Air Due to the Accident at Fukushima Daiichi Nuclear Power Station: Progress Since May 24, 2012

Comparison of our evaluation result (announced on May 24, 2012) to that of a third-party organization

Our result shows a higher I-131 amount (500PBq) compared to the result obtained from a third-party organization (120-200PBq).

Focus

When estimating I-131 amount announced on May 24, 2012, the “ratio of susceptibility of radioactive materials to releasing” (hereinafter referred to as “ratio of susceptibility”) was assumed to be 100 (noble gas):10(iodine):1(cesium), which may have contributed to uncertainty. It is recommended that we reevaluate the release amounts by setting the ratio of susceptibility based on the research paper published by JAEA*.

* Journal of Environmental Radioactivity Volume 112, October 2012, Pages 141-154

Reevaluation

In accordance with I-131/Cs-137 ratio of susceptibility assumed in the JAEA research paper, the ratio of susceptibility was set to be 100 (noble gas):10 (iodine) and 100 (noble gas):1 (iodine). Reevaluation was done by utilizing a program to calculate the radioactive materials diffused into the air (DIANA). The result is as follows.

Estimated amount of radioactive materials released in the air based on the reevaluation result (Unit: PBq)

	Ratio of susceptibility (Noble gas : Iodine)	Noble gas	I-131	Cs-134	Cs-137
Our result announced on May 24, 2012	100：10	500	500	10	10
Reevaluation result based on JAEA research paper	100：10	500	400	40	30
	100：1	700	400	30	20

Evaluation of the estimated result

The result of reevaluation based on the JAEA research paper (with the release ratio set accordingly) did not have major impact on our result (I-131) announced on May 24, 2012.

Other uncertainties

- Meteorological data such as wind direction (16 cardinal points) measured by the monitoring car
- Specification of the program which calculates the radioactive materials diffused into the air (DIANA)