Atmospheric radiation leak underestimated

The Yomiuri Shimbun

Data released by the government indicates radioactive material was leaking into the atmosphere from the Fukushima No. 1 nuclear power plant in early April in greater quantities than previously estimated.

Radioactive material was being released into the atmosphere from the plant at an estimated rate of 154 terabecquerels per day as of April 5, according to data released by the Cabinet Office's Nuclear Safety Commission on Saturday.

The NSC previously estimated radiation leakage on April 5 at "less than 1 terabecquerel per hour."

Iodine-131 and cesium-137 were released into the atmosphere that day at the estimated rates of 0.69 terabecquerel per hour and 0.14 terabecquerel per hour, respectively, the NSC said.

Emissions are converted into iodine-131 equivalents for assessment on the international nuclear event scale (INES), to arrive at the total 154 terabecquerels per day, the nuclear safety watchdog said.

One terabecquerel equals 1 trillion becquerels.

On April 17, plant operator Tokyo Electric Power Co. said in its plan for stabilization of the crippled reactors it would not start to get radiation leakage under control until the plan's fourth month of implementation.

This would mean 10,000 terabecquerels of radioactive substances would be released into the atmosphere from the plant during the coming three months, according to simple calculations based on the estimated emission rate as of April 5.

Emissions in that three-month period alone would therefore exceed the level necessary for a Level 6 severity rating on the INES, the globally accepted measure for evaluating nuclear accidents.
The ongoing crisis at the Fukushima plant has been rated a maximum Level 7 on the scale, which was established by the International Atomic Energy Agency and the Organization for Economic Cooperation and Development in 1992.

The total amount of radioactive material discharged from the plant from March 11 to early April was estimated between 370,000 and 630,000 terabecquerels, according to government sources.

The commission, however, said the figures were estimates only, "with a considerable margin of error." Radiation levels around the six-reactor complex have been slowly falling, it said.

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