

Radioactive iodine 3,355 times legal limit found in seawater

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Radioactive iodine-131 at a concentration of 3,355 times the maximum level permitted under law was detected in a seawater sample taken Tuesday afternoon near the crisis-hit Fukushima Daiichi nuclear plant, the government's nuclear agency said Wednesday.

The highest concentration observed so far in seawater from the troubled power station suggests radiation originating from reactor cores, where fuel rods have partially melted, may have been continuously leaking into the Pacific Ocean.

Hidehiko Nishiyama, a spokesman for the Nuclear and Industrial Safety Agency, said the exact cause of the high iodine concentration remains unknown but that data collected by the plant operator Tokyo Electric Power Co. indicate radiation that has leaked at the site during the ongoing crisis "somehow" flowed into the sea.

He reiterated that the polluted seawater does not pose an immediate risk to health because fishing is not being conducted in the evacuation zone within 20 kilometers of the plant and radiation-emitting substances would be "significantly diluted" by the time they are consumed by marine species and then by people.

"It is important that we continue monitoring radiation data, find out what caused the pollution as soon as possible and take measures to prevent the radiation levels from rising further," Nishiyama said.

On Saturday, the iodine-131 concentration level in the sea around 330 meters south of the drainage outlets of the troubled Nos. 1-4 reactors at the plant reached about 1,850 times the legal limit, but the density had declined to around 28 times on Monday.

Chief Cabinet Secretary Yukio Edano said it is expected to take "a considerable amount of time" before the temperatures of fuel rods in the reactor cores at the power station are lowered in a stable manner.

Tsunehisa Katsumata, chairman of the plant operator known as TEPCO, also said at a press conference that the firm's attempts to bring the nuclear emergency under control will take a long time, saying it is "difficult to stabilize the reactors within several weeks."

TEPCO has been pouring massive amounts of coolant water into the reactors and spent nuclear fuel pools at the plant, where cooling functions were paralyzed after the March 11 magnitude 9.0 quake and ensuing tsunami.

But radiation-contaminated water has been filling up buildings and trenches at the power station, obstructing work to restore the lost functions. Serious damage to fuel rods from overheating could lead to the release of enormous amounts of radioactive materials into the environment.

Nishiyama, meanwhile, said TEPCO has found that the radiation level in water was low in an underground trench, which is connected to the No. 1 reactor's turbine building. The utility firm said most of the water in the gutter is believed to be seawater from tsunami waves.

The agency spokesman said, however, the operator does not plan to release the trench water into the sea and will begin moving it to a building designed for radioactive waste disposal at the plant later Wednesday.

High levels of radiation exceeding 1,000 millisieverts per hour have been detected in water in the trench connected to the No. 2 reactor building, with TEPCO suspecting the polluted water came from the reactor's core.

Highly radioactive water has also been soaking the basements of the reactor buildings, prompting TEPCO to pump the polluted water into tanks. At the No. 1 reactor's turbine building, the depth of stagnant water has been halved to 20 centimeters, Nishiyama said.

A member of the Nuclear Safety Commission of Japan, a government panel, said Tuesday that a pool outside the turbine buildings may need to be dug in case the pumped contaminated water exceeds the capacity of the tanks.

Edano said transferring the highly radioactive water to a tanker vessel is an option being studied by the government and nuclear experts.

The top government spokesman also said the experts have been examining the possibility of covering the reactor buildings damaged by hydrogen explosions with special sheets to reduce the amount of radioactive particles being dispersed from the facility.

Nishiyama also said TEPCO will begin spraying water containing coating agents at the site on Thursday to prevent radioactive dust from being carried away by wind and rain.

As for the future of the crippled plant, TEPCO's Katsumata said the company sees decommissioning the Nos. 1-4 reactors as inevitable. Edano indicated that all six reactors at the plant should be scrapped.

Experts had suggested that the emergency injection of seawater into the Nos. 1-4 reactor cores to cool them down would eventually lead to their dismantlement, as salt and impure substances in seawater causes equipment corrosion.

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