

Cooling system fails in second reactor

The Yomiuri Shimbun

The No. 3 reactor at the Fukushima No. 1 nuclear power plant has lost its ability to supply water to its core, a failure that has lowered the level of cooling water in the reactor and exposed a good part of nuclear fuel rods, the operator of the facility said Sunday.

Failure of the water pump has made it impossible to cool the high temperatures inside the reactor, according to Tokyo Electric Power Co.

As of 7:30 a.m., 2.95 meters of the 4-meter nuclear fuel rods were exposed because of diminished water levels in the reactor.

TEPCO reported the problem to the government in accordance with the Law on Special Measures Concerning Nuclear Emergency Preparedness. The utility operator is concerned that the overheating of the reactor could trigger a core meltdown, as is suspected to have occurred at the No. 1 reactor, where an explosion blew away the roof and the walls of the building that houses the reactor's containment vessel.

According to TEPCO, the pressure in the containment vessel of the No. 3 reactor rose to double the ordinary level at 5:25 a.m.

To lower the pressure, TEPCO started releasing steam that included a mixture of radioactive substances into the air, as it did with the No. 1 reactor, and pouring water on the reactor using firehose pumps.

"[TEPCO] began taking measures to cool the reactor containment," Chief Cabinet Secretary Yukio Edano said in a press conference Sunday.

TEPCO started its first plutonium-thermal power generation operation, known as pluthermal generation, at the No. 3 reactor last September. Pluthermal generation uses plutonium-uranium mixed oxide fuel, known as MOX.

The utility operator said neither of the reactor's pressure vessel or containment vessel have been damaged.

Following the explosion at the No. 1 reactor of the No. 1 plant, TEPCO started filling the reactor pressure containment vessel with seawater Saturday night. The firm said the water had reached the required level by early Sunday morning.

Though the water-level gauge continued showing a low figure, the company said it is unlikely that water is leaking from the reactor.

In addition to its efforts to fill the reactor with seawater, TEPCO also started considering setting up an alternative pump to supply water to the reactor.

Wary of the critical situation, Economy, Trade and Industry Minister Banri Kaieda decided Sunday to dispatch inspectors of the ministry's Nuclear and Industrial Safety Agency to monitor the operation.

TEPCO said it detected a radiation level of 882 micro-Sievert per hour, beyond the legal limit of 500 micro-Sievert per hour, around 8:20 a.m. at the plant's main gate, about 1.5 kilometers away from the No. 3 reactor.

TEPCO filed a report on the unusually high radiation level with the government in line with Article 15 of the Law on Special Measures Concerning Nuclear Emergency Preparedness.

"The amount of radiation outside tends to fluctuate based on direction of the wind. Unless the figure continues rising, we don't have to worry," Edano said.

===

190 feared exposed to radioactivity

As many as 190 people may have been exposed to radioactivity from the Fukushima No. 1 nuclear power plant, according to sources.

The Fukushima prefectural government and the nuclear safety agency confirmed that 22 people had been exposed to radioactive material because of substances temporarily released from the No. 1 plant's No. 1 reactor after its hydrogen explosion Saturday afternoon.

The prefecture said about 80,000 people are subject to an evacuation it has ordered. Residents within a 20-kilometer radius from the No. 1 plant and those within a 10-kilometer radius from the No. 2 plant were asked to evacuate.

In a press conference on Sunday morning, Chief Cabinet Secretary Yukio Edano revealed the possibility that nine out of about 100 residents of Futabamachi were exposed to radioactive material when they went outside to evacuate the area by bus.

However, Edano said the exposure is unlikely to pose any major health risks.

"At this stage, radiation and contamination were found only on clothes and other external areas.

According to experts, that does not pose a serious health risk," Edano said.

Some 90 patients and officials of Futaba Kosei Hospital and 100 elderly people at a special nursing home in the town are believed to have been exposed to radiation.

Of those, 18 officials and one caregiver at the hospital were deemed to be in need of decontamination procedures, in which radioactive substances are removed from surface of the body.

The prefectural government plans to check whether other residents living in the affected area have been exposed to radiation.

(Mar. 13, 2011)

Notizia precedente:

Reactor meltdown feared / Quake disabled Fukushima N-plants' cooling systems

The Daily Yomiuri

The Economy, Trade and Industry Ministry's Nuclear and Industrial Safety Agency said Saturday afternoon that a nuclear meltdown was suspected at the Fukushima No. 1 nuclear power plant's No. 1 reactor.

An explosion was heard from the No. 1 plant at about 3:36 p.m. and white smoke was witnessed about 10 minutes later, Tokyo Electric Power Co officials said, adding that four workers were injured. However, the cause of the blast remained unknown.

TV footage showed that the No. 1 reactor appeared to have been destroyed, with its outer walls seemingly collapsed.

The devastating quake measuring magnitude 8.8 that hit eastern Japan on Friday afternoon disabled the Fukushima No. 1 and No. 2 nuclear power plants' reactor-cooling systems, according to officials.

The level of cooling water in the No. 1 nuclear reactor began dropping after the Friday quake, according to TEPCO.

Agency officials said a team of National Institute of Radiological Sciences detected cesium, a radioactive substance contained in nuclear fuel rods, near the No. 1 reactor of the No. 1 nuclear plant, leading them to suspect nuclear fuel rods in the reactor began melting amid the high temperatures.

The nuclear safety agency said in the afternoon that the level of cooling water in the No. 1 reactor likely had dropped to 1.7 meters below the top of nuclear fuel rods, leading officials to suspect that about half of the rods' length had been exposed.

Workers continued to pour water into the reactor using temporary fire pumps, but the firm said in the afternoon it was considering cooling the reactor using seawater. Though the method would likely make it difficult for the reactor to be used in the future, TEPCO was putting top priority on cooling down the reactor core, the company said.

Earlier in the day, the agency announced that the amount of radiation reached 150 micro-Sievert per hour, or 1,000 times the normal level, in the central control room of the No. 1 reactor.

But officials said that radiation level was not considered to immediately pose health risks to humans.

The agency also observed radiation 70 times the normal level at the plant's main gate, located about 1.5 kilometers away from the No. 1 reactor.

Meanwhile, TEPCO said it managed to release pressure in the No. 1 reactor's containment building.

The company was working to intentionally release radioactive vapor via escape valves in the Fukushima No. 1 and No. 2 plant containment buildings, to lower the unusually high pressure inside.

Workers tried to manually open valves to release vapor, but initially ran into trouble due to unexpectedly high radioactivity levels, according to TEPCO.

On Saturday morning, the government declared a state of emergency for the Fukushima No. 2 nuclear power plant, following a similar declaration Friday night for the No. 1 nuclear power plant, in line with the Law on Special Measures Concerning Nuclear Emergency Preparedness.

(Mar. 13, 2011)

National

go

[Cooling system fails in second reactor](#) (Mar.13)

[20,000 missing in 2 towns / Magnitude of Friday's quake revised upward to 9.0](#) (Mar.13)

[Reactor meltdown feared / Quake disabled Fukushima N-plants' cooling systems](#) (Mar.13)

[Whole towns gone--no cars or people seen](#) (Mar.13)

[Number of dead, missing rises to 1,400](#) (Mar.13)

[700 times more energy than Hanshin](#) (Mar.13)

[Commuters take shelter in Tokyo](#) (Mar.13)

[Kesenuma described as 'hellish sight'](#) (Mar.13)

[Massive tsunami 'caused by quake's shallow focus'](#) (Mar.13)

[Reactor meltdown feared / Quake disabled Fukushima N-plants' cooling systems](#) (Mar.12)

[More](#)