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Japan Nuclear Plant Halts Cooling Effort

By MITSURU OBE

TOKYO—The operator of the Fukushima Daiichi nuclear-power plant in Japan started and then halted an operation to use filtered contaminated water to cool reactor cores.



Agence France-Presse/Getty Images

Workers have installed tanks to store radioactive water at the Fukushima plant.

The process, an important step in resolving the crisis at the plant, was in operation just 90 minutes, beginning Monday afternoon, before it was suspended because of leakage. Tokyo Electric Power Co., or Tepco, said contaminated water was leaking from one of the joints in the complex network of tubes connecting various reactors and purification facilities.

The company said it will "check all other joints for possible leaks to avoid another shutdown of the operation" and will likely resume operations on Tuesday.

The re-injection of water followed the troubled start of the four-stage purification process on June 17. That part of the system, incorporating U.S. and French decontamination technology, also stopped just 90 minutes after its launch, and had intermittent troubles in subsequent trials. What started and stopped Monday is the injection of the purified water into reactors; the purification process itself is running.

The system is supposed to substantially reduce the production of highly radioactive water at the site as water is injected into the reactor cores to stop a dangerous rise in temperature. Some 110,000 metric tons of contaminated water has accumulated in the plant's basements, and Tepco was on the verge of running out of storage space.

"We are getting closer to the goal of achieving a cold shutdown," a condition in which a reactor is kept at safe temperatures on a sustainable basis, said Junichi Matsumoto, a Tepco spokesman, before the suspension of the system.



Tokyo Electric Power Company Architect Hiroo Sugihara unveils his proposal on how to quickly patch a damaged roof above reactor no. 1 at the Fukushima

On Monday afternoon, workers began pumping decontaminated water into the reactors of Units 1, 2 and 3 at a pace of 13 cubic meters per hour. That provided most of the 16 cubic meters per hour of cooling water they need to keep from overheating.

Highly radioactive water has spilled into the ocean at least twice since the plant was ravaged by a massive earthquake and tsunami on March 11. That has caused an uproar from the local fishing industry as well as from neighboring countries such as China and South Korea.

Daiichi nuclear power plant in Japan which is still releasing radioactive material.

Without an injection system, cooling water has to be brought in from outside the plant. The water is irradiated as soon as it is

injected into the damaged reactors because it comes in contact with the melted reactor cores, which are emitting high levels of radiation.

If the system can be stabilized, it will make it easier for Tepco to begin increasing the flow of water to further bring down the reactor-core temperatures, which currently hover between 100 and 160 degrees Celsius (212 and 320 degrees Fahrenheit).

Outside of the malfunctions problems remain, however, including how to dispose of radioactive sludge being created in the filtering process. While Japan has a disposal site for low-level radioactive waste, there are no guidelines for disposing of the type of sludge now being created, which is expected to total 2,000 cubic meters.

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