Nuclear-Fukushima update

The Associated Press

TOKYO, Dec. 3 (Kyodo) — Tokyo Electric Power Co. and the government said Monday they will seek to complete the removal of all fuel assemblies inside the No. 4 unit of the crippled Fukushima Daiichi nuclear plant by the end of 2014, a year earlier than initially planned.

The schedule was moved up amid lingering concern over the condition of the unit that stores 1,533 fuel assemblies in its spent fuel pool, the largest number among the four damaged units at the plant. The upper part of the unit's building was severely damaged by a hydrogen explosion last year.

TEPCO plans to start taking out the fuel in mid-November 2013, a month earlier than initially scheduled, because the clearance of debris from the upper portion of the building has gone smoothly and it has found that it can skip some preparatory work deemed necessary earlier.

To shorten the time for removing the fuel, the utility plans to use two containers, instead of one as earlier planned, to transport the fuel to a so-called shared pool in a different building at the plant site, which is expected to provide more stable conditions for keeping the fuel cool.

The operation is part of a process toward scrapping the damaged Nos. 1 to 4 units at the six-reactor plant.

When the magnitude 9.0 earthquake and tsunami hit the plant on March 11, 2011, the No. 4 reactor was offline for maintenance work with its fuel stored in its spent fuel pool. The Nos. 1 to 3 reactors suffered meltdowns in the disaster.

The No. 4 spent fuel tank currently contains 1,331 spent fuel assemblies and 202 unused ones. The utility has already succeeded in taking out two unused fuel assemblies in a trial. To remove the melted fuel from inside the Nos. 1 to 3 reactors, the utility plans to fill their primary containment vessels with water, which serves as a shield against radiation.

But the damaged vessels are leaking water that is injected as a coolant and there is a need to pinpoint where the leaks are occurring.

Under a plan unveiled the same day, TEPCO said it will send a tetrapod robot developed by Toshiba Corp. to carry out investigation work at the base of the flask-shaped containment vessel of the No. 2 unit, starting from Dec. 11.

The robot has a folding arm that can release a companion smaller robot mounted with a camera, allowing it to take images of areas that may be damaged.

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