TEPCO prepares to remove spent fuels

Tokyo Electric Power Company plans to start removing spent fuel rods from the crippled Fukushima Daiichi nuclear plant this year. It will be the first major step in a decommissioning process that is expected to take 40 years.

The March 11, 2011 earthquake and tsunami triggered meltdowns in three reactors, and a hydrogen explosion damaged the structure that houses a fourth reactor. During the initial stages of decommissioning, TEPCO workers will need to remove the spent fuel and dismantle reactor buildings, all while keeping melted fuel cool.

The first step in that process involves the removal of 1,533 spent fuel rods stored in the pool in the reactor 4 building. There is more used fuel there than in any other reactor building at the plant.

It will be a delicate operation, made even more sensitive by the fact that the hydrogen explosion raised concerns about the earthquake resistance of the structure.

TEPCO workers plan to begin the work in mid-November, with the aim of finishing it by the end of 2014. They have already started bringing in parts of cranes and other heavy machinery needed for the job.

But high levels of radiation at the site and other problems have continued to slow the decommissioning process. Last September, workers accidentally dropped a steel beam weighing 470 kilograms into the fuel pool of the reactor 3 building.

Nearly two years after the Fukushima accident, TEPCO must also speed up a survey in preparation for its plan to remove the melted fuel within 10 years. In addition, it needs to accelerate efforts this year to develop remote-controlled robots that will help with that work.