# Nuclear fuel removed from crippled Japan plant

April 15 2019, by Hiroshi Hiyama


The withdrawal of nuclear fuel is a delicate operation for the Tokyo Electric Power Co

The operator of Japan's crippled Fukushima power plant on Monday began removing atomic fuel from inside a building housing one of the

reactors that melted down in 2011.

The delicate operation represents the first time the Tokyo Electric Power Co (TEPCO) has pulled out fuel rods from inside a highly contaminated building containing the melted-down reactor, and comes four years behind schedule.

Due to high radiation levels, technicians used remote-controlled equipment to haul fuel from a "storage pool" inside the building.

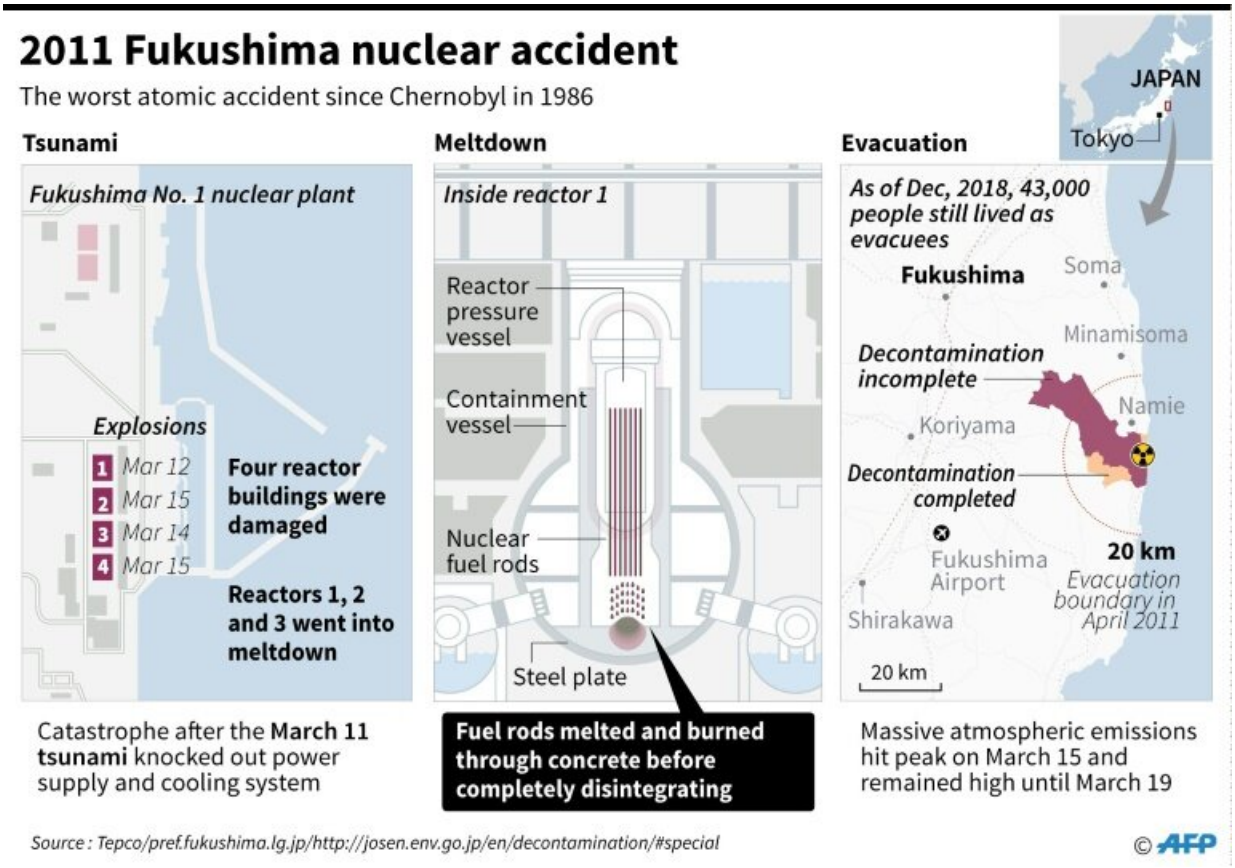
Operations were briefly suspended early Monday afternoon after a problem with the equipment removing the fuel, but resumed shortly afterwards.

"We finally started this work. We will spend two years removing 566 units of fuel from reactor three," said Takahiro Kimoto, a TEPCO spokesman.

TEPCO removed four units as planned on Monday, with workers continuing to remove debris that have fallen inside the pool and other areas, Kimoto told reporters.

"Factors such as removal of debris and various troubles have caused delays, which we realise have caused significant worries to people in the region and others," Kimoto said.

"Putting safety as our priority, we will carefully continue this work," he promised.




Graphic on the Fukushima nuclear disaster in 2011.

Engineers have had to contend with clearing earthquake debris inside the building and an array of other technical challenges, said TEPCO spokeswoman Yuka Matsubara.

"We had to proceed carefully (to remove debris), and we needed to take measures as dust would waft up and increase radiation readings," she told AFP.

TEPCO engineers will not yet attempt to extract molten nuclear fuel that remains deep inside the mangled reactor. This is considered the most difficult part of the massive clean-up operation and is not expected to

begin until 2021.

## 'Reconstruction plan'

In February, TEPCO sent a remote-controlled probe to pick up pebble-sized pieces of the melted fuel in a bid to find out whether the material could be moved.

The next step in that painstaking process will be to remove some of the fuel as a sample, which is scheduled to happen by March 2020.

The company also faces other difficult challenges, including working out how to dispose of large quantities of contaminated water stored in containers at the plant site.

In the worst nuclear disaster since Chernobyl in 1986, reactors one, two and three at the Fukushima Daiichi power plant melted down after a deadly earthquake and tsunami that struck Japan in 2011.

The accident was the worst since Chernobyl in 1986

The tsunami killed around 18,000 people and caused widespread devastation, and the nuclear meltdown forced the evacuation of areas near the plant.

Reactors four through six were offline at the time of the disaster for inspections and did not suffer meltdowns, though reactor four was damaged by an explosion in the days after the tsunami.

In December 2014, TEPCO finished removing all 1,535 units of nuclear fuel kept inside the storage pool at reactor four.

The company aims to conduct the same operations for the buildings for reactor one and two by 2023 as part of a four-decade plan to dismantle the entire Fukushima plant.

Japan's government has pushed a reconstruction plan for the surrounding region that includes decontaminating affected areas and removing topsoil.

This month, an evacuation order was lifted for part of Okuma, one of two towns where the nuclear plant is located.

But regions affected by the disaster have struggled to attract back residents who fled in the wake of the meltdown, with many still concerned about radiation despite government assurances.