

# A robot has begun a 2-week mission to retrieve melted fuel from the damaged Fukushima nuclear plant

September 10 2024, by Mari Yamaguchi

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In this photo released by Tokyo Electric Power Company Holdings (TEPCO), TEPCO executives observe a mission to retrieve the first sample of melted fuel debris from inside one of three damaged reactors, at an operation room at the Fukushima Daiichi nuclear power plant in Okuma, Fukushima prefecture, northern Japan Tuesday, Sept. 10, 2024. Credit: Tokyo Electric Power Company Holdings via AP

An extendable robot began on Tuesday a two-week mission to retrieve

the first sample of melted fuel debris from inside one of three damaged reactors at the Fukushima Daiichi nuclear power plant.

Highly radioactive [fuel](#) and other materials in the reactors melted when a [massive earthquake](#) and tsunami in 2011 damaged the plant's cooling systems.

The plant's operator, Tokyo Electric Power Company Holdings, has previously used [small robots](#) to examine the inside of the reactors, but this is the first time for it to collect a sample of the melted debris in what will mark the start of the most challenging part of the plant's decadeslong decommissioning.

The mission was initially scheduled to begin on Aug. 22 but [was suspended](#) when workers noticed that five 1.5-meter (5-foot) [pipes](#) to be used to push [the robot](#) into the reactor had been arranged in the wrong order, TEPCO said.

The equipment was reassembled in the right order for Tuesday's attempt, the company said.

Once inside the [reactor vessel](#), the robot is operated remotely from a safer location.

The robot, nicknamed "telesco," can extend up to about 22 meters (72 feet), including the pipes pushing it from behind, to reach the melted fuel mound, where it will use tongs to collect a fragment measuring less than 3 grams (0.1 ounce). It is expected to take about two weeks to obtain the fragment.



In this photo released by Tokyo Electric Power Company Holdings (TEPCO), monitoring workers rearrange the push-in pipes, at the Fukushima Daiichi nuclear power plant in Okuma, Fukushima prefecture, northern Japan Tuesday, Sept. 10, 2024. An extendable robot began on Tuesday a two-week mission to retrieve the first sample of melted fuel debris from inside one of three damaged reactors at the nuclear power plant. Credit: Tokyo Electric Power Company Holdings via AP



Tokyo Electric Power Company Holdings, also known as TEPCO, the operator of Japan's wrecked Fukushima Daiichi nuclear power plant, reveals a robot to be used to retrieve debris at the power plant in Kobe, western Japan, May 28, 2024. Credit: Kyodo News via AP, File



In this photo released by Tokyo Electric Power Company Holdings (TEPCO), TEPCO executives observe plant officials making final procedural checks from an operation room to monitor and remote control an extendable robot, at Fukushima Daiichi nuclear power plant in Okuma, Fukushima prefecture, northern Japan Monday, Sept. 9, 2024. Credit: Tokyo Electric Power Company Holdings via AP



In this photo released by Tokyo Electric Power Company Holdings (TEPCO), monitoring workers rearrange the push-in pipes into the right order, at Fukushima Daiichi nuclear power plant in Okuma, Fukushima prefecture, northern Japan Saturday, Sept. 7, 2024. Credit: Tokyo Electric Power Company Holdings via AP



This photo shows the Fukushima Daiichi nuclear power plant in Okuma, Fukushima prefecture, northern Japan, on Aug. 22, 2024. Credit: Kyodo News via AP



This photo shows the Unit 2 reactor of the Fukushima Daiichi nuclear power plant in Okuma, Fukushima prefecture, northern Japan, on Aug. 22, 2024.  
Credit: Kyodo News via AP

An estimated 880 tons of fatally radioactive molten fuel remains in the three reactors.

Chief government spokesperson Yoshimasa Hayashi noted that the mission marked the start of the most difficult phase of the Fukushima Daiichi cleanup. "The government will firmly and responsibly tackle the decommissioning until the very end," he said.



The government and TEPCO have set a 30- to 40-year target for the cleanup, despite criticism it is unrealistic. No specific plans for the full removal of the melted fuel debris or its storage have been decided.

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