



<PROJECT PROGRESS>

The Project for Development of Technology for Detailed Investigation inside Primary Containment Vessel for Unit 2 of the Fukushima Daiichi Nuclear Power Station

Research and development of the robot arm, an access and survey device, has been completed, and the device has been transferred to the Fukushima Daiichi Nuclear Power Station (April 7, 2026)

IRID has been conducting research and development on detailed investigation technology for inside of the primary containment vessel (PCV) of Unit 2, Fukushima Daiichi Nuclear Power Station, Tokyo Electric Power Company Holdings, Inc., since 2017.

This detailed investigation includes plans to construct an access routes to PCV's inside, acquire 3D laser scanner data of the inside condition, and conduct an experimental fuel debris retrieval. We have newly developed a robot arm consisting of 18 axes, with a total length of 22m and a mass of 4.6 tons, based on the multi-joint robot arm technology developed by Veolia Nuclear Solutions Ltd. in the UK, which has employed in remotely operating fusion reactor maintenance.

This robot arm was manufactured in the UK starting in the fall of 2018 and transferred to Japan in July 2021. Since then, we have conducted operational verification tests at Mitsubishi Heavy Industries, Ltd.'s Kobe Shipyard and Machinery Works, performance verification tests using a mock-up test at the Japan Atomic Energy Agency Naraha Center for Remote Control Technology Development, overall inspection work including maintenance and subsequent operational verification, and irradiation tests of the camera mounted on the robot arm at other test sites in Japan.

As these research and development of robot arm system and a series of final operational verifications have been completed, we transported the robot arm system to the Fukushima Daiichi Nuclear Power Station today.

IRID will continue to contribute to the decommissioning of the Fukushima Daiichi Nuclear Power Station, an extremely difficult task that is unprecedented worldwide.