

JAEA R&D in Fukushima

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Abstract

The Japan Atomic Energy Agency, JAEA, as Japan's sole comprehensive research and development institute in the field of nuclear science, has been missioned to deploy technical support for post-accident environmental remediation and decommissioning of the disabled Fukushima Daiichi nuclear power station.

Immediately after the 2011 nuclear accident, JAEA launched the environmental decontamination pilot project to examine the applicability of various environmental decontamination technologies, radiation measurement for a wide range of areas including both contaminated areas within the Fukushima prefecture (car-borne radiation surveys) and also the entire land of Japan (air-borne monitoring technologies).

In addition to these "off-site" activities, JAEA stepped up research and development in 2015 to support "on-site" decommissioning of the crippled nuclear reactors and contaminated power station site. JAEA's R&D charge covers a wide range of differing technologies and disciplines needed for decommissioning. Techniques range from remote control technology development for dismantling jobs and workers' safety under inaccessibly high radiation environments, analysis and characterization of radioactive waste and fuel debris generated by the accident, to fundamental research for accident scenario analysis and innovative radiation detecting technology development. In addition, JAEA has built specialist infrastructure devoted to these tasks.

The decommissioning of the post-accident nuclear power station site and environmental remediation will be a long lasting endeavor, projected to take 30 to 40 years to complete, and therefore, development of human resources is essential. JAEA's R&D sites could serve as a platform for domestic and international human resource development through training and education within our R&D facilities, which importantly, would contribute to knowledge and technology transfer to future nuclear generations.