

Access

Nuclear Robotics/Remote Solutions

Provider of advanced engineering and delivery of bespoke robotic/remote handling solutions for a variety of hazardous end markets where quality and timely delivery are paramount.

Today, Veolia Nuclear Solutions is an undisputed leader in the nuclear market, designing and delivering innovative solutions with projects ranging from Decontamination and Decommissioning (D&D) to the processing of nuclear waste. We have a strong reputation with our customers that have found the solutions and technical know-how to be readily adaptable to solve a variety of technical challenges no matter how big or small.

Veolia's solutions are generally customized to meet the needs of our clients' challenging projects where safety and the reduction or elimination of personnel exposure is of utmost importance. We pride ourselves on taking unique challenges with minimal to no solution and developing concepts that result in practical, field-proven technologies.

Veolia leverages its engineering capabilities as well as unique processes protected by patents and trade secrets, to deliver a variety of robotic/remote solutions. This includes the assembly, integration and delivery of customized manipulators, decommissioning or maintenance platforms, tools and other off-the-shelf robotics.

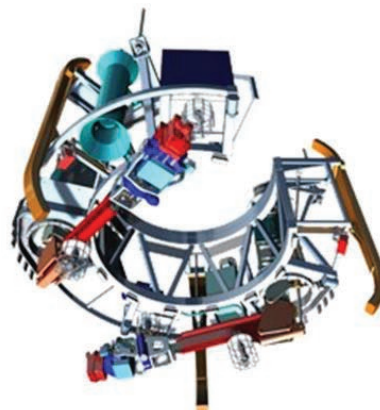


Technology: The Rotary Deployment Arm (RDA)

Challenge: Liquid and Solid waste retrieval from four underground storage tanks at the Trawsfynydd Nuclear Power Station (UK).

Solution: Developed a customized robotic manipulator to operate in a multitude of environments and complete all operations using a variety of tools.

Benefits: Modular system able to meet a multitude of requirements with a single technology platform.



Technology: Shaft Intervention Platform (SIP)

Challenge: Waste retrieval from a deep, contaminated shaft at the Downreay Nuclear Site (UK).

Solution: Re-configure a range of mechanical equipment for highly specialized intervention.

Benefits: Flexible, cost-effective, can be adapted to specific scenarios, able to operate remotely in high-dose environment.

WHY VEOLIA IS THE BEST CHOICE TO 'ACCESS' HIGH HAZARD ENVIRONMENTS.

- Proven Delivery of Robotic/Remote Solutions to the most high profile decommissioning projects world wide.
- Pragmatic solutions to solve problems leveraging fit-for-purpose engineering with an agile, creative approach.
- Expertise in lightweight, long reach, high payload, high radiation manipulator systems.
- Maximization of the use of commercially available equipment and components that can be integrated to create specialized deployment systems for remote handling and operations.
- Strategic planning including concept and feasibility studies for complex projects.
- On-Site installation, training and operational support.

Technology: Fukushima Inspection and Repair Manipulators (FIM and FRM)

Challenge: Inspect and repair the primary containment vessel of the unit 2 reactor at the Fukushima Daiichi Nuclear Power Plant in Japan.

Solution: Development of two custom robotic manipulators to access and stabilize the damaged reactor for future decommissioning activities, e.g. fuel debris retrieval.

Benefits: The remote manipulator provided will be deployed through the floor of a room adjacent to the Primary Containment Vessel (PVC) and used in the process of remotely locating and characterizing the leaks to allow for future repair activities.



Remote Excavators for Hot Cell Clean-up



Remote Excavator Prototype



Current Hot-Cell Condition

Technology: Commercially off-the-shelf excavator arms along with customized tooling and waste packaging equipment for highly contaminated soil remediation.

Benefits: A cost effective approach using proven off-the-shelf equipment customized for nuclear use.

Solution: The use of an innovative combination of existing hotcell equipment, commercially available equipment modified for nuclear use, and special tools to perform a series of remote operations.

Challenge: Remove the floor and highly contaminated soil (1.3 million curies) underneath the 324 B-Cell at the Hanford Site.

Contact us for more information:

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