

[Form 2 (to be reported to Committee on Countermeasures for Contaminated Water Treatment  
and to be disclosed to public)]

Technology Information	
Area	RFI 1 Section (4)
Title	Facilitating Removal of bolted type of tanks.
Submitted by	CUT Nuclear UK Ltd, Aberdeen Scotland UK
<p>1. Overview of Technologies (features, specification, functions, owners, etc.)</p> <p>The CUT Group of companies operates in the International, Off shore Oil, Gas, Marine and Petro -Chem. Sectors, in addition to Nuclear Decommissioning. CUT specialise in developing innovative means to remotely deployed cutting technologies in areas where manual intervention is impossible. The deepest cut we have performed is at 2500 metres deep.</p> <p>CUT UK Ltd design manufacture and operate bespoke cutting machines around the globe including Brazil, USA, Europe, and Asia. Please refer to the attached appendix for further track record.</p> <p>CUT have developed and successfully completed a number of similar cutting operations on large items similar to the Storage Tanks at Fukushima Daiichi NPP. We have 3 proven techniques that could achieve the cutting operations however we propose at this stage to recommend our circumferential cutting machine that can be readily and quickly deployed from a man access hoist and operated from a safe distance thereby not subjecting the operator to a radiation dose.</p> <p>The scheme is shown in use in the photographs below consists of our specialist diamond wire cutting head that is driven on a rack set around the circumference of the tank. The cutting head travels along the rack and the diamond wire produces a tangential cut through the vessel wall.</p>	







The steel outer casing was approximately 75 mm thick with a refractory brick liner that had to remain dry. This was successfully achieved. The diameter of the vessel was greater than 10 meters.

It is also possible to size reduce each ring section into individual plate sections for ease of handling decontamination and storage/disposal

CUT hold the patent on this technology and means of deployment. CUT also develops and produces its own special diamond wires that are not available on the open commercial market.

2. Notes (Please provide following information if possible.)

- Technology readiness level (including cases of application, not limited to nuclear industry, time line for application)

The technology and the scheme is already proven and has been successfully deployed on a number of projects. A machine based on the same concept but that takes into account the specifics of the Fukushima storage tanks could be manufactured, trialed and deployed within 6-8 weeks.

Because the equipment is relatively small and light to deploy, a number of machines could be operated simultaneously to remove the tanks as quickly as the IRID require.

CUT operates in an International market and can deploy its workforce quickly to meets the client's requirements.

- Challenges

CUT UK Ltd takes Health, Safety and protection of all its employees and the entire general public as a priority. CUT will expect our operators are given appropriate on site safety training and appropriate PPE for all aspects of the work on site.

CUT UK Ltd will require more details of the tanks and the proposed programme of work before costing can be given. CUT can arrange for commercial and technical managers to attend meetings in Japan if required.

- Others (referential information on patent if any)

CUT UK Ltd and its parent company hold patents on all its machines and diamond cutting tools.

All CUT Ltd machines will remain in the ownership of CUT UK Ltd. In the event CUT UK Ltd machines cannot be decontaminated, they must be immediately destroyed and disposed of as nuclear waste as soon as the work is completed.