

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

Technology Information	
Area	3 (Select the number from "Areas of Technologies Requested")
Title	Port Filtration System
Submitted by	The SimplyInfo.org Research Team
<p>1. Overview of Technologies (features, specification, functions, owners, etc.)</p> <p>Two plans are presented in this proposal. Due to the lack of detail provided publicly by TEPCO, actual current use of the port was unknown. If continued entry into the port is needed, this would direct what option should be done. It is our suggestion that the port no longer be used if at all possible.</p> <p>Concept one involves a passive filtration of the port entrance with an option to allow entrance to the port only when needed.</p> <p>Passive filtration involves a series of media filters to attempt to capture some of the contamination within the water while still allowing water to pass through the entrance.</p> <p>Concept two involves permanent containment of the port along with an active filtration system. By blocking the port entrance, water discharge canals and any other openings to the port, water within the port could be more effectively monitored and managed.</p> <p>Active filtration uses a series of media based filters to clean and exchange the water within the port. This would over time lower the contamination levels in the port if new isotope contribution has been stopped. If contamination continues to flow into the port this could work to keep levels from increasing.</p> <p>Please see the attachment for specifications, details of the functions of the system and diagrams.</p> <p>Owners: SimplyInfo.org is the "owner" of the intellectual property of the concept. All equipment suggested to complete the project are based on capability or adherence to technical standards. "Like for like" equipment could be exchanged to suit availability in Japan. Brands of equipment suggested are to clarify the concept. We have no affiliations of any type with the brands or companies used as representative suggestions.</p>	

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

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

Both concepts would require specific design and fabrication but use commonly found materials. Timelines for either concept could be one year or less if sufficient resources are used and work done concurrently.

- Challenges

The unknown specifics of the sea port construction provide a challenge for suggesting any detailed solutions. We have provided a number of alternatives to attempt to cover multiple situations.

Continued contribution of contamination to the sea port will challenge any long term clean up. Partial control over the conditions and contamination levels within the port may help pin point any remaining areas of contamination leakage.

Any sea front project at Daiichi is subject to potential tsunami damage and should have that factored into safety protocols for actual installation.

Decontamination of the port may also require the periodic removal of silt and debris from the port floor. Our records show the port floor was grouted over since the initial accident. This should facilitate further removal of silt and debris.

- Others (referential information on patent if any)

There is currently no patent on the concept proposed here. Representative suggestions of brands or types of equipment may be subject to their own patents with the manufacturer.

3.

**【Areas of Technologies Requested】**

- (1) Accumulation of contaminated water (Storage Tanks, etc.)
- (2) Treatment of contaminated water (Tritium, etc.)
- (3) Removal of radioactive materials from the seawater in the harbor

- (4) Management of contaminated water inside the buildings
- (5) Management measures to block groundwater from flowing into the site
- (6) Understanding the groundwater flow