

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

Technology Information	
Area	1-4 (Select the number from "Areas of Technologies Requested")
Title	Structured water as a possible solution for radiation measures
Submitted by	BioAq/ Trygve Forssten
<p>1. Overview of Technologies (features, specification, functions, owners, etc.)</p> <p>Microstructure of liquid water is believed to influence its mechanical, electro-magnetic as well as quantum properties. In this sense water is not the same as other water even though being constituted by the same (liquid) elements. This is of course easy to notice when water undergoes phase transitions from solid (ice), to liquid and gas form respectively. Water in liquid form also changes its properties when its microstructure is changed.</p> <p>The author of this proposal has extensive empirical experience of using a specific system to structure water by a patent pending approach that 'whirls' water in a controlled and repeatable setting. The proposed system induces changes in the water microstructure through flow surface effects. It uses the flow of water streamed through the apparatus (that is passive) to change its microstructure to a desired state. The system is currently sold as a commercial product, the BioAQ, and has numerous applications ranging from agriculture to construction industry.</p> <p>The idea behind the proposal is to investigate the usefulness of the approach in the treatment of highly radio-active and contaminated water. The working hypothesis is that structured water can significantly reduce contamination effects by processes of encapsulation of radio-active isotopes. The main objective is to find empirical evidence of such at first, then after proper evaluation, and if results are deemed significant, prepare mass utilization measures for prevention of radio-active emissions in contaminated water basins. It is proposed for the hypothesis to be tested and evaluated experimentally in various ways. A first test is the direct structuring of contaminated water in order to reduce radiation levels. This test can be performed by comparing containers with water of the same contamination level, measuring radiation levels before and after structuring.</p> <p>Further applications that build upon the first hypothesis would involve:</p> <ol style="list-style-type: none"> 1) Whirled water administered to humans to protect tissue from radiation exposure. 2) Whirled watering of specially prepared lawns in order to collect and transport radioactive isotopes from contaminated soil. 3) Whirled water in decommissioned nuclear reactor to facilitate faster cooling and reduced radiation levels. 	

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 devices can be delivered in 1-2 months

There are comprehensive positive experience of whirled water in various areas. Please see below regarding some applications.

1. Plants: sustainable documentation regarding positive effects using whirled water in cultivation.

Some research results: http://www.bioaq.com/forskning_en.php

These effects have also been observed by many individuals, including professional cultivators.

2. Whirled water seems to have positive effects on water courses, for example reducing cyanophyta according to tests in 15 lakes, including lab tests.

http://www.bioaq.com/forskning_en.php

Even other positive effects have been noted, they are under research.

3. Advantageous effects have been noted when using structured water in metallic work

<http://www.bioaq.com/dokument/MetallicAB-engl-2011.pdf>

4. Pilot tests shows that concrete strengthens about 15%

5. According to a great number of users their wellbeing have been improved, for example properties in skin and hair. There are also reports from persons experiencing other improvements.

Individuals who are electrosensitive report an increased wellbeing when using the products, and an improvement in their situation

6. BioAq whirlers seem to capture photons. This property of spirals has been sustainable documented by a.o. Nobel price winner FA Popp and Peter Gariaev.

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- Challenges
BioAq special designed whirler should be tested with regard to radiation circumstances

- Others (referential information on patent if any)
Patent pending

【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