# Hedgehog™ Contaminant Removal System

## BENEFITS

- Highly effective in treating arsenic-contaminated systems and can be expanded to filter other contaminants
- Less costly than traditional removal systems
- Commercially available components with unique design
- More efficient for smaller tank sizes
- Lower maintenance costs

## APPLICATIONS

- Water treatment
- Ideal for use in smaller community water tanks or personal water tanks

## U.S. PATENT #

- 7514004

## SD #

- 10055

## INTELLECTUAL PROPERTY & LICENSING CONTACT

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## Summary

The 'hedgehog' is an in-tank recirculating treatment system designed to reduce the levels of a variety of organic and inorganic contaminants in water storage tanks. The hedgehog works by utilizing a recirculation pump that continually sends water though a treatment module to reduce the levels of contamination.

Originally developed for arsenic decontamination, this in-tank filtration device has been extensively tested on small water systems (~100 connections or less) with ambient arsenic (As) levels of 11-25 ppb. Results of this testing indicate that the system can routinely achieve low cost compliance with the new US arsenic limit of 10 ppb. The smaller scale, greater efficiency, and reduced cost of this filtration system make it a viable option of small tank owners and communities. The annual cost for the Hedgehog™ is approximately 1/3 of the GIM option. Estimates indicate similar results and costs are achievable for a variety of other types of contaminants.

## Licensing & Partnering Status:

Various license and partnering options are available. Please contact the Intellectual Property department to discuss.

## Technology Readiness Level:

Sandia estimates this technology's TRL at approximately a level 6/7. Prototypes have been tested and shown to work in an operational laboratory environment which includes the integration and demonstration of the components.

National Nuclear Security Administration

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