HEDGEHOG™ CONTAMINANT REMOVAL SYSTEM

Sandia National Laboratories

intellectual property MANAGEMENT, LICENSING, & ALLIANCES

TECHNOLOGY READINESS LEVEL: 7

US PATENT # 7,514,004

PROTOTYPES HAVE BEEN TESTED AND SHOWN TO WORK IN AN OPERATIONAL ENVIRONMENT

TECHNOLOGY 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.

POTENTIAL APPLICATIONS

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

TECHNOLOGICAL BENEFITS

- Highly effective in treating arsenic-contaminated systems; can be expanded to filter other contaminants
- Less costly than traditional removal systems
- Commercially available components with unique design

TECHNOLOGY INQUIRY?

For more information or licensing opportunities contact us at

ip@sandia.gov

Refer to SD # 10055

or

https://ip.sandia.gov

NNSA National Nuclear Security Administration

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U.S. DEPARTMENT OF ENERGY