



# What's New?

Q1 FY24

## Newly Published

### *Multigenerational Zebrafish Exposure to PFOS Study*

One of the lowest PFOS toxicity values reported is reduced growth of zebrafish exposed to 0.6 µg/L (Keiter et al. 2012). As this study had low experimental replication and reported values much lower than previously reported in this species, researchers at ERDC investigated the study's reproducibility using a more robust experimental design. The results of ERDC's research, funded by the Department of Defense's Strategic Environmental Research and Development Program, were recently published in *Environmental Toxicology and Chemistry*.

Using a state-of-the-art flow-through system designed for continuous PFOS delivery, as well as a system to treat PFOS waste, the researchers exposed three generations of zebrafish to this contaminant. Effects (survival and growth) were only observed at the highest exposure concentration (100 µg/L) in this more robustly designed study, which is several orders of magnitude higher than results reported by Keiter et al. (2012). The study results have been shared with the Australian government and the U.S. EPA to inform development of criteria for protection of aquatic life.

Check out the article at <https://doi.org/10.1002/etc.5770>

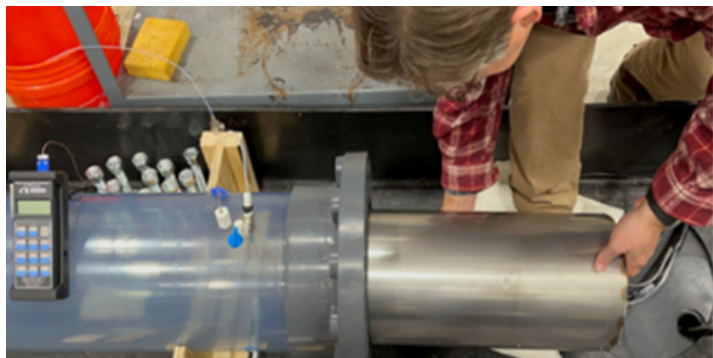


## AMSEEC Researchers Participate in NATO Group

Researchers from the ERDC's Environmental Laboratory (EL) and Cold Regions Research Environmental Laboratory (CRREL) participated at the 52nd NATO Applied Vehicle Technology (AVT) Panel Business Meeting in Båstad, Sweden Oct. 9-13, 2023, as U.S. DoD-designated technical experts on high priority NATO science and technology needs. These researchers presented on novel, ongoing advanced material and emerging contaminant research at the ERDC. These presentations included updates on available PFAS treatment technologies and efforts to characterize ambient PFAS concentrations in environmental media.

## New 6.4 Project

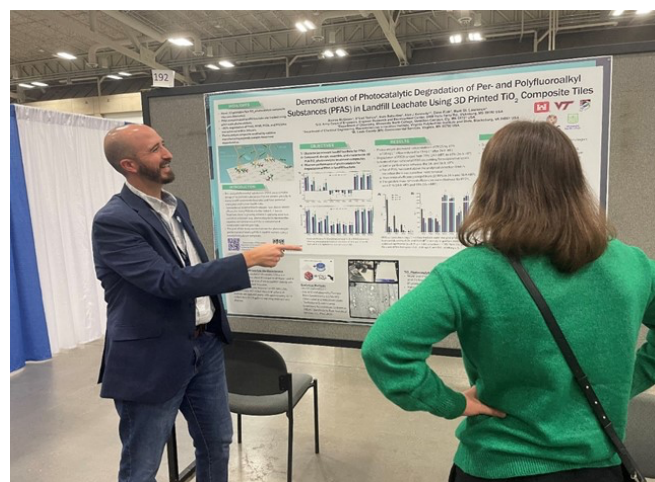
### *Testing PFAS Treatment Technologies*



As part of a newly funded demonstration-validation study, ERDC researchers will be testing how effective several promising PFAS destructive technologies are at treating aqueous film forming foam (AFFF) concentrate. Technologies to be tested include supercritical water oxidation (SCWO), hydrothermal alkaline treatment (HALT), and sonolysis. Additionally, a field-deployable analytical technology providing near real-time analysis of PFAS in soil at field sites will also be evaluated against results from the current standardized analytical method (EPA 1633).

## AMEEC Shines at SETAC North America

Researchers from the ERDC Environmental Laboratory gave presentations on their cutting-edge, ongoing advanced material and emerging contaminant research at SETAC North America's 44<sup>th</sup> Annual Meeting, which took place in Louisville, Kentucky. Meeting participants — including more than 1,500 scientists and engineers representing government, academic, and industrial institutions throughout the U.S. and the rest of the world — provided ERDC researchers the opportunity to connect with key regulators and researchers.



## Questions?



If you are interested in learning more, please do not hesitate to reach out to us!

[paige.m.krupa@usace.army.mil](mailto:paige.m.krupa@usace.army.mil)

[david.w.moore@usace.army.mil](mailto:david.w.moore@usace.army.mil)

Visit our website at <https://amseec.el.erdcdren.mil/>