

Wednesday 21 September

Innovative technologies to destroy PFAS win esteemed award

New technologies to clean up PFAS-contaminated liquids won the crcCARE Innovation Award at the 2022 CleanUp conference last week.

AECOM's DE-FLUORO™ technology is one of the first commercially available, economical, and environmentally sustainable, on-site destruction treatment for high-concentration PFAS wastes. AECOM's Global Initiative Leader, Gavin Scherer, said the technology uses electrochemical oxidation to break the carbon-fluorine bonds in PFAS, which causes the molecules to break down.

'Compared to other technology that separates PFAS from the liquid, ours breaks it down, so there is no further contamination,' Mr Scherer said. 'We also don't have any offsite transportation costs because our treatment takes place onsite.'

An estimated \$2-4 billion worth of work is required to treat PFAS over the next decade. DE-FLUORO™ aims to target a significant share of this by treating industrial wastewater, stockpiles of firefighting foam and other PFAS-contaminated liquids.

The crcCARE Innovation Award recognises researchers and environmental consultants who develop innovative ways to monitor, assess and remediate environmental contamination. The award aims to inspire industry, businesses, communities, local governments, schools and individuals to take action towards a more sustainable future.

The runner-up for the crcCARE Innovation Award was for EPOC Enviro's PFAS treatment technology, Surface-Active Foam fractionation (SAFF®). Chief Technology Officer for EPOC Enviro, David Burns, explained that SAFF® is an ex-situ process that uses air bubbles to remove and concentrate PFAS from contaminated water sources, including landfill leachate and desalination wastewater. 'When air bubbles rise through the water, PFAS molecules can attach to the surface of the air bubble,' he said. 'Once at the top of the water, the bubbles (and PFAS) are removed.' The PFAS waste can either be taken away or destroyed onsite through technology like AECOM's award-winning DE-FLUORO™. Early next year, a larger scale US Air Force research project will demonstrate the complementary pairing of SAFF® and DE-FLUORO™ on a military base.

crcCARE hosted CleanUp 2022 in Adelaide earlier this month. CleanUp 2024 will again be held in Adelaide. crcCARE is an industry-funded national research centre of excellence recognised globally for its crucial input into environmental contamination and remediation research. crcCARE works with partners to solve contamination challenges, providing unprecedented opportunities to scale up research to clean the environment and apply knowledge to commercial uses.

Media assistance:

Alysha Huxley, Scientell, 0459 223 089, alysha@scientell.com.au



AECOM Global Commercial Lead, Gavin Scherer (left), accepting the Innovation Award, with award runner-up David Burns (right), EPOC Enviro Chief Technology Officer and inventor of SAFF®.