

DE-FLUORO™

PFAS DESTRUCTION TECHNOLOGY



DE-FLUORO™ is a world-first economically and environmentally sustainable treatment technology that destroys PFAS from contaminated liquids without creating hazardous by-products.

Unlike existing treatment technologies, DE-FLUORO offers a complete PFAS destruction solution through electrochemical oxidation. It can be coupled with non-destructive technologies to deliver a 'whole of life cycle' solution, or as a stand-alone on-site destruction technology.

GET IN TOUCH

We welcome the opportunity to further discuss DE-FLUORO and its capability to reduce PFAS liability.



GAVIN SCHERER

Global Initiative Leader –
PFAS Commercialization
M +61.417.131.437
gavin.scherer@aecom.com



ROSA GWINN

Global Initiative Leader –
PFAS Technical
M +1.301.585.1586
rosa.gwinn@aecom.com

Why Is DE-FLUORO Unique?

Existing technologies do not destroy PFAS; they separate and concentrate them onto filtration media. This spent media often requires off-site disposal via traditional methods such as incineration, which are energy intensive and carbon producing. Furthermore, depending on the efficiency can result in PFAS being dispersed back into the environment, impacting human health.

Our DE-FLUORO technology deploys Electrochemical Oxidation to break the carbon-fluorine PFAS bonds using a **proprietary, highly durable and low-cost-electrode**. This results in a **compact, highly efficient and cost effective** treatment system that destroys PFAS in solution on site, eliminating the need for off-site disposal.

Demonstrated Results

DE-FLUORO is a viable destruction technology that builds upon successful bench trials, our 'Real World' demonstration and field pilots, as well as our world-first on-site large-scale demonstration programs in Australia and the U.S. between 2021 and 2022.

DE-FLUORO destroys PFAS in multiple types of media, with co-mingled contaminants and varying water chemistry. Our team has successfully used the technology to mineralize PFAS with complete defluorination and desulfurization. This includes successfully treating PFAS in wash waters associated with foam transition programs, ion-exchange regenerant waste, soil washing wastewater and other PFAS-impacted natural waters and wastewaters and Aqueous Film Forming Foam (AFFF) concentrate.

DE-FLUORO Treatment Train

The DE-FLUORO system is a modular treatment system that reduces PFAS concentrations as a standalone approach, or alternatively to levels that allow polishing by an optional filtration system prior to discharge.

DE-FLUORO can operate 24 hours a day with minimal, to no on-site supervision and can be powered by solar with battery storage, further reducing operational costs, contributing to supporting sustainability commitments, and making DE-FLUORO ideal for remote locations.

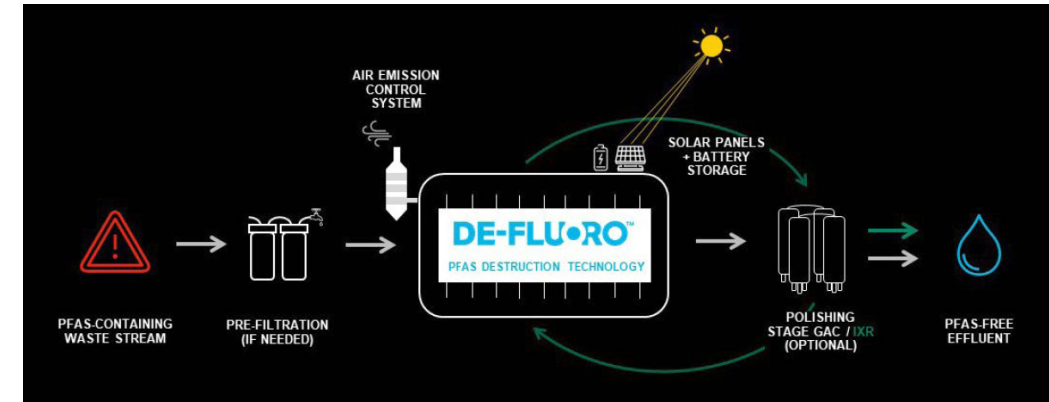
DE-FLUORO Commercial Application

Regulations are emerging that require many industries to properly dispose of PFAS-impacted liquids as they transition over to next generation solutions. This includes AFFF concentrate and PFAS-impacted wash waters that are either stockpiled or will be generated as a result of foam transition programs and the associated cleaning of foam storage/distribution infrastructure.

DE-FLUORO is an attractive alternative to existing off-site destruction technologies to address and support PFAS-impacted liquids management. Mobile, closed-loop treatment systems are easily deployed and operated at a site, or at a fixed licensed facility.

Our large-scale DE-FLUORO system in the U.S. includes enhancements made after the first successful field demonstration in Australia, including increased treatment capacity and the ability to operate in alternating reduction and oxidation modes. These enhancements further increase the effectiveness and efficiency of the technology.

Our systems are now available to the industry and to assist in evaluating the applicability for use of this treatment system prior to mobilization, our team has developed scaled-down DE-FLUORO evaluation systems in the U.S., Australia and Europe. These systems offer a cost-effective way to provide confidence that the DE-FLUORO system is right to meet individual PFAS challenges.



DE-FLUORO Preferred Waste Streams:

- Wash Waters associated with cleaning of infrastructure and foam transition programs
- Industrial Wastewaters
- AFFF Concentrate
- Still Bottom or Concentrated Waste derived from separation technologies
- Reverse Osmosis Brine
- Landfill Leachate

