PFAS ANNIHILATOR™ Destruction Technology

PFAS disposal has previously been limited to incineration, landfilling, and collection in stockpiles. Each currently available solution only relocates the PFAS contamination and allows harmful by-products to continue. As EPA advisory limits tighten (0.02 ppt for PFOS and 0.004 ppt for PFAS) there is a growing need for an effective means of PFAS treatment.

Destroying PFAS at The Source

The PFAS ANNHILATOR™ is a ready-now, on-site destruction solution powered by supercritical water oxidation (SCWO). The patented technology breaks the nearly indestructible carbon-fluorine bond, destroying PFAS chemicals to non-detectable levels at the source. It is a scalable solution, can serving as a stand-alone solution or in combination with other systems to break down PFAS in landfill leachate, Aqueous Film Forming Foam (AFFF), drinking water, and wastewater.



AFFF

Safely and completely destroys Aqueous Film Forming Foam (AFFF). PFAS ANNIHILATOR destroys PFAS in firefighting foam without creating harmful byproducts associated with other treatment methods.



Landfill Leachate

A proven on-site solution, PFAS ANNIHILATOR destroys over 99.99% of PFAS in contaminated landfill leachate without creating secondary waste.



Drinking and Wastewater

Destroy PFAS to non-detect levels in contaminated wastewater. PFAS ANNIHILATOR works on-site and only produces inert salts, eliminating the need for incineration or storage of byproducts.

ANNIHILATOR™ Technology

Destroys 99.99% of PFAS in dilute and concentrated PFAS matrices

Does not generate or transfer harmful byproducts

Eliminates the need for incineration or storage

Greatly reduces longterm exposure risk from landfilling and other exposure pathways

Operates with an energyefficient heat exchanger to extract the thermal energy of the effluent to heat the influent



A Proven Solution

In customer engagements, PFAS ANNIHILATOR™ technology has successfully destroyed 99.99% of PFAS in landfill leachate and AFFF, which concentrations in the millions of parts per trillion.



Landfill Leachate Deployment Highlights

- Destroyed concentrated and unconcentrated landfill leachate on site
- >99.9% reduction of PFAS for all tested runs
- No PFAS detected in reactor effluent (except PFOA <10 ppt)
- No PFAS detected in the waste stream vapor
- All volatile organic compounds (VOC) and semi-volatile compounds (SVOCs) destroyed to non-detect levels in aqueous effluent
- Some low levels of metals in the effluent removed by ion exchange



AFFF Deployment Highlights

- Mobile platform for on-site treatment
- Destroyed four formulations of AFFF (Buckeye, National Foam, PHOS-CHEK, Thunderstorm)
- Beginning concentrations ranged from 3 to 16% AFFF
- >99.99% removal of PFAS*
- No PFOA, PFOS, PFBS, and GenX detected in the final effluent
- 100% destruction of VOCs (SVOCs were not detected in the influent or effluent)

Revive Environmental is bringing this technology to scale to treat industrial volumes.

Contact one of our experts to learn more. www.revive-environmental.com



^{*}Based on analytical data received through 22 September 2022