What is PFAS?
Per- and polyfluoroalkyl compounds

Per- and polyfluoroalkyl compounds (PFAS) are a family of man-made chemicals that includes PFOS, PFOA, GenX and other similar chemicals. PFAS compounds have been utilized in a variety of manufacturing industries in the USA and around the globe, since around the 1940s. Applications including PFAS compounds are airports, military and firefighter training facilities (firefighting foam), as well as other manufacturing operations related to the production of certain consumer products. Among the most produced and studied within this family of chemicals is PFOS and PFOA. Like other chemical compounds in this family of chemicals, these extensively studied chemicals have created challenges for both the environment and within the human body – referring to the fact that they do not decompose readily, and they can accumulate over time.

Why is Treatment Important?

Treatment for this family of compounds is important as many people have been exposed to PFAS within the US, Australia and other parts of the world, in particular due to PFAS contamination of their water supply. There is evidence that exposure to PFAS related contaminants can lead to adverse health outcomes for humans and potentially animals. Studies on the most studied PFAS molecules, PFOS and PFOA have indicated that these compounds can cause reproductive and developmental diseases including disorders of the kidneys and the liver, immunological efforts, increase cholesterol and tumors.

Typical treatments employed in the treatment of these compounds include reverse osmosis, activated carbon, and ion exchange. While these particular technologies can work to reduce these PFAS levels, they typically require extensive pretreatment and are costly for their operation and maintenance costs.

What is EOX?

GWT(r) EOX(tm) advanced oxidation treatment process is a patent pending proprietary modular treatment solution utilizing electrochemistry as a primary oxidation method prior to polishing treatment processes to significantly reduce/remove difficult recalcitrant chemical compounds including PFAS chemicals, 1,4 dioxane and other recalcitrant emerging contaminants including pharmaceutical residuals for drinking water and certain wastewater treatment applications. This dramatically lowers the cost of operating and maintenance of treating these particular contaminated water streams.
Services Offered:

- Lab/Bench Treatability Testing Services with Validation by Third Party Lab

Systems:

- These systems are modular systems designed based on the treatment application and flow rates of the water to be treated

Advantages:

- Compact system solution foot print
- Rapid reaction rates
- Optimized for removal of biologically toxic & non degradable compounds
- Optimization of unstable radical formation to oxidize contaminants
- Can be used with post polishing treatment systems to optimize treatment operating costs by up to 50%
- Does not concentrate the waste contaminants, such as membranes
- Can be controlled via process automation for simple operation
- Reduced labor input costs

GWT - Innovation in Water(r)

For questions relating to EOX advanced oxidation treatment for PFAS, or other emerging contaminants, contact us via phone at 877 267 3699 or reach us via email at customersupport@genesiswatertech.com.