BioLargo
We Make Life Better

PRODUCT SHEET

AEC
AQUEOUS ELECTROSTATIC CONCENTRATOR

Solutions For Aqueous Wastes

BioLargo's Aqueous Electrostatic Concentrator (AEC) solutions for aqueous waste streams can remove and destroy per- and polyfluoroalkyl substances (PFAS) from most liquid wastes including foamate and landfill leachate. The 3-step AEC process can remove and destroy over 99% of the majority of long chain, short chain and ultrashort chain PFAS while generating a small fraction of the PFAS-laden waste product that other technologies create, meaning less waste-related liability and lower operational and lifecycle costs.

The stepped approach not only eliminates PFAS, but it also reduces both COD and VOCs making the liquids suitable for most NPDES permits while eliminating the need to dispose of PFAS-laden waste.

BioLargo's AEC PFAS treatment solution has been proven in numerous pilot studies to be highly effective in treating leachate, including raw leachate, post-UF leachate, and post-foam fractionation leachate, removing more than 99% of PFAS from each stream.

The system's low electrical, chemical, and waste generation costs result in industry-leading lifecycle costs, projected to be 80% lower than competing technologies.

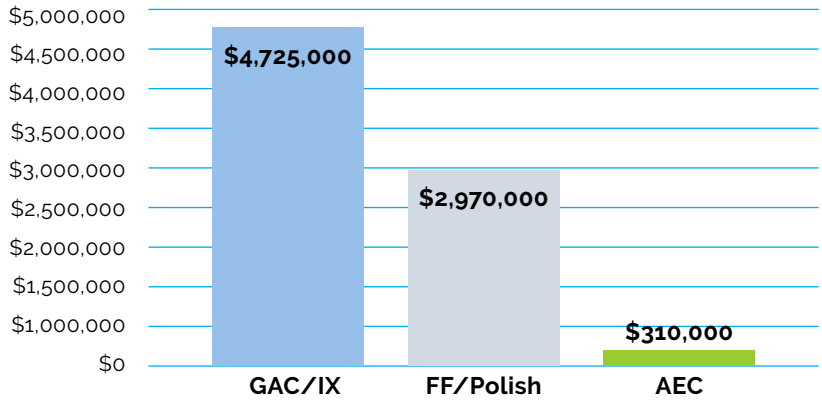
FOAMATE TREATMENT

RAW LEACHATE TREATMENT

Leacheate Source	Starting PFAS Amount (ppt)	Removal % by AEC Train
Post-Biological UF	59,438	>98
Raw	147,226	>99.8
Foamate from Foam Fractionation	475,847	>99.6

TABLE 1: Results treating various leachate wastes with the AEC process. In all cases, more than 98% of PFAS was eliminated. System worked with biological UF treated leachate, foam fractionation treated leachate, and raw leachate.

ESTIMATED 10-YEAR LIFE CYCLE COST



Process	Average Installed/ Capital Cost	Average Daily O&M Cost	Average Annual O&M Cost
Ion Exchange / Activated Carbon Comination	$4 - $6 million	$1,400 - $1,500 per day	$500k - $550k per year
Foam Fractionation and Polishing Step	$6 - $8 million	$800 - $900 per day	$300k - $330k per year
AEC System (3-4 stage system)	**$2.5 - $4.0 million**	**$100 - $150 per day**	**$31k per year**

TABLE 2: Estimated treatment costs using AEC process vs traditional treatment technologies

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