CASE STUDY

PROJECT PFAS TREATMENT PLANT

PRODUCT Multimedia Filtration (MMF)

INDUSTRY Infrastructure and Urban Development

LOCATION Western NSW

BACKGROUND

Perfluoroalkyl and polyfluoroalkyl substances (commonly referred to as PFAS) are pollutants of increasing public health and environmental concern, consisting of a large variety of man-made organic compounds. Among those compounds, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are the two most widely used and studied. PFAS contamination can be found in soil, groundwater, surface water, and sediments. PFAS and related compounds are currently imported into Australia, mainly for use as mist suppressants in the metal plating industry, hydraulic fluid in the aviation and defence industry and in fire suppressants.

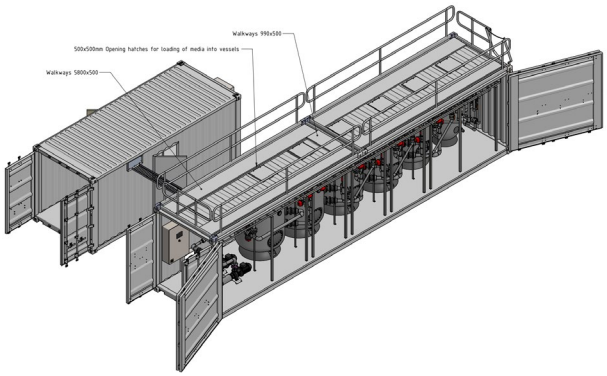
The toxicity, bioaccumulation potential, and resistance to natural degradation of these chemicals has led to great concern for their adverse effects on human health and the environment. Subsequently, treatment systems for the removal of these compounds are being installed across Australia and internationally. MAK Water was approached by a tier one contractor to manufacture two mobile PFAS removal plants to treat a mixture of contaminated stormwater and secondary effluent for off-site discharge.

SOLUTION

Containerised Multimedia Filter (MMF) to treat 240 m^3/day of PFAS contaminated water.

MAK WATER KEY SOLUTIONS

- Custom manufacture of customer design for a mechanical and electrical package using chemical dosing, media filtration, granular activated carbon (GAC) and specialised resin
- AS1210 media vessels
- Custom instrumentation package including Premium Instrumentation package with ClearAccess™ Remote Monitoring and Control
- Containerised system with custom roof hatches and side opening doors for practical access, folding guardrails suitable for road transportation



3D schematic of one of the two plants designed by our in-house engineering team

Two photos of one of the filtration plants in the testing bay at the MAK Water factory

RESULTS AND BENEFITS

- **Portability.** Side-opening sea containers offer great accessibility in an standard road-transportable package for rapid deployment
- **Turnkey Solution.** Complete package of bespoke client design for plug and play deployment to various sites
- **Technical Support**. Expert advice and consultation with all parties throughout the process
- **Plant Reliability.** The high-quality equipment and quality manufacturing have provided reliable in field operation with minimal maintenance