CASE STUDY

PROJECT	PFAS TREATMENT PLANT
PRODUCT	Multimedia Filtration (MMF)
INDUSTRY	Infrastructure and Urban Development
LOCATION	East Coast of Australia

mak water
water | wastewater | sewage

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.

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 and subsequently treatment systems for removal of these compounds are being installed across Australia and internationally. 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 industry and surfactants in the photography industry.

MAK Water was approached by a major environmental waste disposal company to assist with design and manufacture of a PFAS removal plant to treat contaminated ground water from various sources such as PFAS manufacturing and processing facilities, airports, and military installations that use firefighting foams.

SOLUTION

- Custom design and manufacture of a skid mounted Multimedia Filtration Plant for PFAS removal
- Provisions made to bypass sand filtration, granular activated carbon filtration or resin as required, for maximum operational flexibility
- Lead-lag configuration of resin polishing with reversible flow function
- Custom instrumentation package including premium instrumentation package with ClearAccess™ Remote Monitoring and Control
- On site commissioning and training of local operators

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RESULTS AND BENEFITS

- **Compliance.** Custom plant maintains compliance to meet site specific discharge requirements
- **Plant Reliability.** The high-quality equipment and robust design have provided reliable operation with minimal maintenance
- **Local.** The plant was designed and manufactured in Australia using materials sourced from local suppliers. Providing superior build quality and spare part availability.

Multimedia Filtration Plant for PFAS removal on it's way to site