

About ECT2

Emerging Compounds Treatment Technologies (ECT2), a Montrose Environmental Group company, is a specialist provider of cutting edge technology solutions to remove emerging and difficult to treat contaminants from water and vapour. Our systems use proprietary and cost-effective approaches that leverage a range of media to enable efficient removal of contaminants and on-site regeneration. Our solutions are field proven as well as sustainable to minimise requirements for future generations to manage waste by-products generated during treatment processes.

ECT2 offers a full array of services dedicated to understanding, removing and managing the impacts of contaminants in air and water.

Accomplishments

With successful treatment systems deployed around the world for the management and removal of water and vapour contaminants – including per- and poly-fluoroalkyl substances (PFAS), 1,4-dioxane, and specialty Volatile Organic Compounds (VOC) – ECT2's treatment systems have achieved industry-leading uptime and delivered contaminant removal of concentrations well below specified limits.

- 3+ billion litres of water treated in the last four years
- 25+ PFAS systems installed or under construction worldwide since 2016
- 200+ point-of-use treatment systems (POETS) in operation
- 100% on-time delivery

What sets us apart?

At ECT2, we combine advanced treatment technology, unmatched real-world experience, and a relentless pursuit of excellence to deliver outstanding results whether your biggest challenge is the contamination itself, site restrictions, timeline pressures, a very public spotlight – or all of the above.

- Media regeneration in place many times without loss of absorption capacity
- The only patented regenerable ion exchange resin system for PFAS
- 67% reduction in treatment system size, including modular mobile units
- 80%+ less waste generated than through the use of conventional technologies
- 98%+ uptime when operating 24/7
- 50%+ lower lifetime costs than conventional technologies — independently verified
- Focused on water and vapour treatment ensuring that we do not get distracted with other remediation activities
- Core technical team each have decades of experience in water treatment, including biological, complex fuel products, and emerging contaminants
- Dedicated in-house R&D laboratory focused on new media research, new product development, and more
- No exceedances of treated water criteria, even when limit of reporting (LOR) at ultra-trace analysis used

RESEARCH & DEVELOPMENT

ECT2 relishes opportunities to address difficult treatment challenges because of the strength of our R&D team. We design and conduct bench scale tests, field pilot programs, integrate R&D and process teams to solve unique client requirements, and are an integral part of product development. Our bench-scale media testing lab, with integrated analytical capabilities, has performed over 800 bench and pilot studies involving over 80 media types. With two patented technologies and four pending, our team is continuously pursuing the most effective, economical, and sustainable solutions to the complex problems that come with emerging contaminants. The R&D team is also collaborating with university and corporate researchers to support development of cutting edge PFAS destruction technologies.

DESIGN & ENGINEERING

ECT2 understands that every situation requires a unique approach. Water type, analyte, concentrations, client and project objectives and site constraints all form part of our recommended solutions. Our in-house process and design engineering teams can either develop recommendations from our standard treatment system product line or provide custom solutions leveraging our extensive experience. The engineering team's understanding of the drivers behind each client's project, including site characteristics and regulatory framework, assure we design effective and cost-efficient treatment solutions to complex problems.

INSTALLATION & CONSTRUCTION MANAGEMENT

ECT2 recognises that the success of any infrastructure-related project relies on expert project and construction management. We have successfully executed multiple site infrastructure and installation works in recent years. We have a record of 100% on-time delivery of installations, including those in remote locations, within operating airfields, alongside highways, and within the boundaries of larger construction footprints. Our goal, and track record, is to meet client objectives on time, every time.

START-UP & COMMISSIONING

Client success is ECT2 success. Our focus on clients continues into the commissioning phase with a robust set of procedures, built and refined from experience, to ensure the operational phase can confidently commence and meet goals at startup. Our processes ensure that any potential equipment and infrastructure issues are identified and rectified in a controlled manner prior to our treatment systems going operational. Our treatment systems have achieved 100% compliance with treated water criteria from day one of commissioning.

OPERATIONS & MAINTENANCE

Our O&M teams are intimately familiar with the treatment systems they are responsible for regardless of whether full time, onsite operations or regular servicing and maintenance checks are performed. Operations are supported by skilled technical teams across multiple disciplines including process and design engineering, data management, chemistry, field operations and project management as well as remote monitoring capabilities during 24/7 operations. Integration of our field and process engineering teams occurs daily and allows challenges to be met and resolved quickly and effectively.