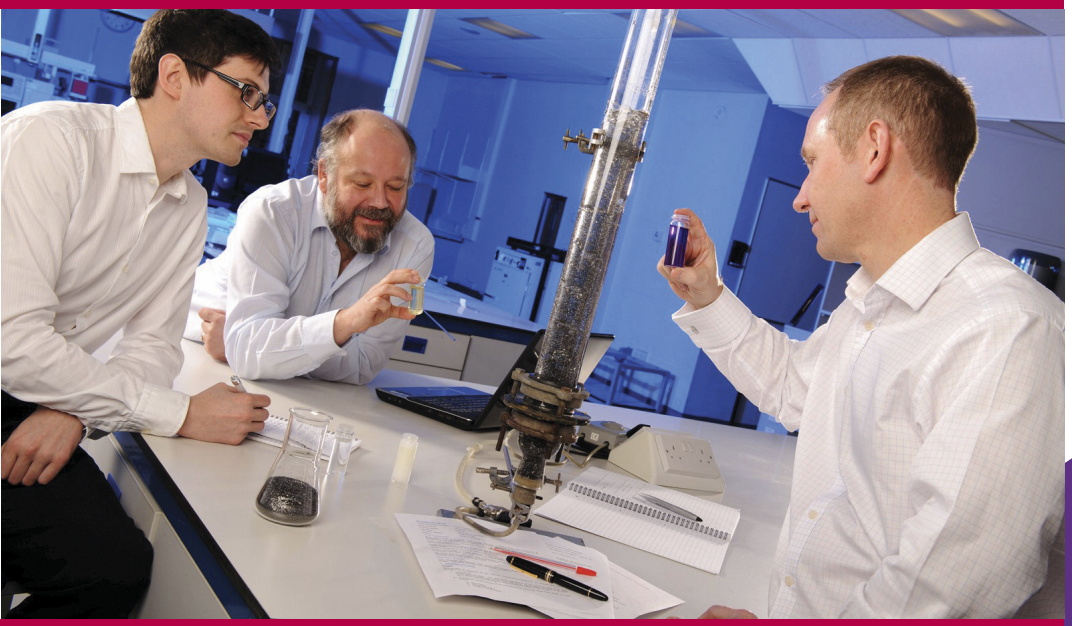
ARVIA TECHNOLOGY

Developing a novel treatment process for drinking water.

Challenge

Entry into the UK drinking water market requires Drinking Water Inspectorate (DWI) regulatory approval and consequent acceptance in the industry's 5 year asset management plan (AMP).

In order to apply for such approval, Arvia needed to demonstrate and develop a deeper understanding of the performance of their technology to address the treatment of very low and trace organic contaminants – which are some of the most difficult contaminants for existing techniques to treat.



Solution

Arvia sought expertise from Professor David Polya and Dr Bart Van Dongen from the School of Earth, Atmospheric and Environmental Sciences at The University of Manchester, whose research encompasses quantification of micro-pollutants in drinking water.

Together they developed a 30 month project plan and appointed KTP Associate Mohammed Akmez Nebeerasool to establish and embed in-house skills within Arvia to better understand the mechanisms of organic breakdown and nature of contaminant interaction with the adsorbent, in order to demonstrate compliance to DWI regulations. During the project the team characterised the contaminants for removal (decontamination), which in turn produced Standard Operating Procedures for working with a variety of targeted contaminants.

Benefits

The partnership between Arvia and The University of Manchester has been mutually advantageous and has resulted in a number of key achievements. The Drinking Water Inspectorate application has been approved and submitted and Standard Operating Procedures have been developed and embedded for 7 key water quality determinands.

Arvia's commercial strategy has been realigned towards treating waters containing low and trace levels of organic compounds, which is anticipated to generate in excess of £0.5M additional sales within the next three years. Arvia is now working with a number of water companies to implement treatability studies and pilot facilities. In order to target the market opportunity for low and trace organics, Arvia has employed 4 new staff and over £350,000 has been invested in new plant, machinery and a new laboratory site.

MANCHESTER 1824
The University of Manchester

arvia ORGANICS DESTRUCTION

Company Overview

Arvia Technology was formed as a spin out from The University of Manchester to commercialise a water and wastewater treatment technology. After successfully demonstrating the benefits of the system to the nuclear industry to treat radioactive oils, Arvia wanted to apply the process to offer a new and alternative technology for the treatment of drinking water.

"Working with Arvia on this KTP has enabled us to use our expertise to help promote British job-creating solutions to important environmental problems."

Prof David Polya,
The University
of Manchester

"Analysis of micro-pollutants was beyond Arvia's capabilities and working with the University allowed Arvia to develop in-house expertise, whilst applying for the relevant approvals and gaining a deeper understanding of the process."

Nigel Brown,
Founder Director,
Arvia