

Do we need to worry about PFAS?

When investigating sites in the UK for ground and groundwater contamination, Per- and Polyfluoroalkyl Substances (known as PFAS) are not always high on the list of potential contaminants considered. Indeed, PFAS have not historically been high priority for regulators either. Toxicology, analysis and remediation of PFAS are emerging sciences, leading to complexities in assessing and reducing the risks posed to human health, water resources and the wider environment, and a temptation to avoid the issue, especially where there is a lack of clear, current regulatory drivers.

However, with their widespread use in industry and manufacture, extreme persistence in the environment, and increasing numbers of studies suggesting they may be harmful to human health (including potential carcinogens), PFAS are attracting growing media, political and regulatory attention around the world. Australia, the United States and parts of Europe are ahead of the UK in terms of regulation, litigation and remediation of PFAS and it seems certain the UK will follow suit with more extensive and tighter regulation imminently.

For sites that are, have been, or are close to a source of PFAS, this could leave operators, investors, landowners and developers with unforeseen liabilities, costs and delays. Future remedial costs associated with operational sites could also be significantly higher than currently anticipated.

What are PFAS and where are they found?

PFAS are a group of several thousand man-made chemicals, many of which are widely used in industry due to their resistance to water, oil/ grease, fire and heat. They have many applications and have been commonly used for their non-stick, stain resistance and lubrication properties. They are also used in electronics, including mobile phone and tablet technology.

As contaminants, PFAS in firefighting foams attracted significant attention following the Buncefield incident and firefighting foams have since been widely identified as a source of contamination in the environment, particularly at airports and military bases. However, there are numerous other sources of PFAS including industrial and manufacturing sites, and many secondary sources such as landfills and sewage plants.

Studies show that human exposure to PFAS is widespread

and most people in industrialised countries have measurable amounts of PFAS in their blood.

Legislative Context

European legislation around PFAS contamination is steadily increasing. The compound Perfluorooctane Sulfonate (PFOS), its salts and Perfluorooctane Sulfonyl Fluoride (PFOSF) were listed as Persistent Organic Pollutants (POP) under the Stockholm convention, adopted to EU legislation, in 2009. PFOS is listed as a Water Framework Directive priority hazardous substance in EU directive 2013/39/EU, which also set out Environmental Quality Standards for PFOS in inland surface waters that have been adopted in the UK.

A number of European countries, the German states of Bavaria and Baden-Württemberg and some states in the US and Australia, have gone further in deriving screening/ threshold values for additional PFAS compounds in controlled waters. However, most of these documents remain provisional.

The future of PFAS regulation in the UK

Currently the UK is behind parts of the world in the assessment of the risks of PFAS to human health and controlled waters, and in the development of screening criteria. However, a greater number of threshold values from around the world are accepted by UK regulators as a measure of PFAS contamination and these - or future UK-derived values - are likely to become embedded into UK regulations in the future.

As research into the toxicology of PFAS progresses it is likely that existing legislation will be extended to cover a much wider range of compounds and the future of PFAS regulation in the UK will need to reflect this.

Stakeholders can be prepared for changes ahead by keeping abreast of developments in PFAS legislation and guidance around the world as well as in the UK and assessing sites for potential PFAS contamination at an early stage. RPS is a world-leading provider of integrated technical, advisory and project management services for PFAS management, investigation and remediation around the globe and - using our strong global connectivity and PFAS experience - we can help anticipate, avoid and mitigate any significant future impacts and protect clients from unexpected costs and delays.

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