PFAS

Per- and Poly Fluoro Alkyl Substances (PFAS) are a group of emerging contaminants which have gained significant media and public attention in recent history due to their widespread use and potential risks to human health and the environment.

PFAS consist of thousands of individual compounds containing the per–fluoroalkyl moiety which have broad industrial and consumer applications. These compounds are extremely resistant to thermal, chemical and biological breakdown, and as such, are highly persistent in the natural environment. Bioaccumulation and biomagnification in the food chain combined with potential links to human and ecological toxicity has seen PFAS emerge as contemporary contaminants of global concern.

Environmental emissions of PFAS come from many sources, most notably in the application of Aqueous Film Forming Foams (AFFF). Historical use of AFFF across defence sites, airports, fire training facilities, mine sites and storage facilities has led to legacy contaminant issues that can persist for many decades.

Challenges to remediation are presented due to the high mobility of PFAS through water systems, leading to expansive contamination plumes that require remediation to low target concentrations in order to meet regulatory requirements and mitigate potential risks posed to receptors. Undertaking works within PFAS impacted areas can therefore have significant cost implications if conservative approaches are adopted in lieu of tailored, expert advice. Effective stakeholder engagement and responsive consultation is essential to ensuring timely project delivery.

There are few experts with enough experience to undertake site assessment, management and remediation, and provide strategic advice to successfully navigate these issues in a timely and cost effective manner.

Western Environmental has been actively engaged in the development of PFAS assessment and management strategies over many years and are considered PFAS subject matter experts. Having worked on several major, high-profile projects where PFAS is the primary contaminant of concern, and being responsible for environmental management of construction projects where PFAS occurs, Western Environmental can offer the following high quality, industry-leading services:

- Strategic project advice

- Preparation of PFAS specific Sampling, Analysis and Quality Plans, including site-specific sampling methodologies for soil, sediment, water, and biota.

- Field data collection and sampling programmes in accordance with industry best practice

- Analytical laboratory selection, procurement and quality control data assessment

- Preparation of Detailed Site Investigation Reports

- Tier 3 Quantitative human and ecological risk assessment

- PFAS Remedial Action Plans

- PFAS Construction Environmental Management Plans

- PFAS Dewatering Management Plans

- PFAS Spoil Management Plans

- Cost-Benefit Analysis of PFAS disposal options

- Compliance monitoring for PFAS during works

- Post-works PFAS Closure Reporting

Cognisant of the costs associated with effective PFAS remediation and with experience in the design, fabrication and operation of groundwater treatment systems, Western Environmental are leading a national consortium developing a proprietary remediation methodology for PFAS impacted soils, surface water and groundwater.

Comprising water treatment experts, remediation contractors, waste disposal contractors and multiple universities across Australia, the consortium is developing technology to minimise remedial costs by concentrating and reducing the volume of PFAS waste streams from environmental media. The system is mobile, capable of treating waste volumes on scales that will facilitate large scale construction, and capable of remediating low-level impacts that are typically encountered at the interface with sensitive receptors to levels that are safe for human exposure.

FOR A CONFIDENTIAL AND FREE APPRAISAL OF YOUR PROJECT REQUIREMENTS, PLEASE CONTACT:

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