

It is not only diamonds that are forever – a snapshot of forever and hazardous chemicals

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A recent study conducted by the Manchester Metropolitan University revealed that the processes intended to decontaminate noxious liquid landfill waste before it re-enters rivers and sewers lead to increased levels of some of the worst toxic chemicals, being per- and poly fluoroalkyl substances (“**PFAS**”).^[1] PFAS is the umbrella term that refers to a group of thousands of synthetic chemicals (approximately 15,000) that are known for their indestructible and non-stick properties. PFAS are found in various domestic products, such as waterproof clothing, furniture, cookware, electronics, food, packaging, and firefighting foams.^[2] Due to its persistence and resistance to natural degradation processes, PFAS do not break down for thousands of years, which means that these chemicals essentially exist forever, resulting in ever-increasing levels of these substances in the air, water, and soil.

The first PFAS were created in 1940, and studies over the years have linked PFAS to a wide range of diseases, including cancer and birth defects.^[3] The hazardous nature of PFAS has led to various countries imposing restrictions and bans on the production, distribution, import, and export of PFAS and other hazardous substances. In South Africa, the Minister of Forestry, Fisheries and the Environment (“**Minister of FFE**”) published the “Regulations to Prohibit the Production, Distribution, Import, Export, Sale and Use of Persistent Organic Pollutants that are listed by the Stockholm Convention on Persistent Organic Pollutants” (“**POP Regulations**”).^[4] In terms of the POP Regulations, no person may produce, distribute, import, export, sell or use, *inter alia*, per-fluorooctanoic acid (“**PFOA**”), which is a type of PFAS, its salts and PFOA-related compounds.^[5] Any person who contravenes the POP Regulations may be liable to pay (i) a minimum fine of R5,000,000 or may be imprisoned for five years for a first offence, or receive both a fine and imprisonment or (ii) a maximum fine of R10,000,000 or may be imprisoned for 10 years in the case of a second or subsequent offence, or receive both a fine or imprisonment.^[6] The POP Regulations contained transitional provisions, in terms of which the substances listed in Regulation 3 of the POP Regulations were phased out over a 12-month period.

In 2002, South Africa acceded to the “Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals and Pesticides in International Trade” (“**Rotterdam Convention**”). The Minister of FFE, accordingly, enacted the “Regulations to Domesticating the Requirements of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 2023” (“**Rotterdam Regulations**”).^[7] Even though the Rotterdam Regulations will only come into effect on 12 December 2024 and are not yet in effect, as at the date of this article, it makes provision for, *inter alia*,

- a general prohibition in terms of which no person may import chemicals into or from South Africa without prior consent, unless such chemicals are (i) an unintentional contaminant in products or (ii) to be used for laboratory-scale research or as a reference standard;
- the process to obtain prior consent from the Designated National Authority to import or export chemicals from South Africa;
- the record-keeping obligations imposed on persons who import or export chemicals from South Africa in accordance with the Rotterdam Regulations;
- the list of chemicals controlled under the Rotterdam Regulations; and
- the penalties for any contraventions of the Rotterdam Regulations.

The South African legislature has published Regulations and Norms and Standards to address the growing concerns around landfills and to mitigate against the potential contamination of groundwater sources. In this regard, the Minister of FFE enacted

the “National Norms and Standards for Disposal of Waste to Landfill” (“**Landfill Norms and Standards**”),[8] which, *inter alia*, sets out the various landfill classifications and that regularises the standards for the containment barriers of landfills. In addition, the Department of Water and Sanitation published its “Guideline for Pollution Control Barrier System Design”,[9] which sets out cost-effective and environmentally acceptable waste disposal facility designs to prevent groundwater and surface water pollution.

Despite the legislative efforts of the South African legislature, illegal landfills and dumpsites remain a concern, especially considering the potential of PFAS and other hazardous chemicals to cause severe pollution that is detrimental to the environment and human health. It is estimated that 90% of the waste produced in South Africa ends up in landfills.[10] Globally, sanctions against multinational companies that contravene local and international laws pertaining to waste management are increasing, with one of the biggest recorded settlements being a \$10.3 billion in terms of which a prominent multinational conglomerate agreed to pay this settlement following allegations that it had contaminated public water sources with, *inter alia*, PFAS.[11] South African companies are urged to familiarize themselves with the POP Regulations and the steps they are required to take to ensure compliance at all times with South Africa's waste management legislation, and now specifically in relation to PFAS and other hazardous chemicals.

[1] <https://www.theguardian.com/environment/2024/nov/04/decontamination-of-landfill-waste-leads-to-increase-in-toxic-chemicals-says-study>. (accessed on 5 November 2024)

[2] <https://www.theguardian.com/environment/2023/feb/23/what-are-pfas-forever-chemicals-how-toxic-are-they-and-how-do-you-become-exposed> (accessed on 6 November 2024)

[3] <https://www.theguardian.com/environment/2024/oct/15/cost-dealing-pfas-problem-sites-frightening-environment-agency-england> (accessed on 6 November 2024)

[4] Published in terms of section 25(3) of the National Environmental Management Act, in *Government Gazette* 44449, on 12 May 2021

[5] Regulation 3 of the POP Regulations

[6] Regulation 4 of the POP Regulations

[7] Published in terms of section 25(3) of the National Environmental Management Act, in *Government Gazette* 48098, on 21 February 2023

[8] Published in terms of section 7(1)(c) of the National Environmental Management: Waste Act No 59 of 2008

[9] Guideline for Pollution Control Barrier System Design, published on 3 September 2021

[10] <https://www.regenize.co.za/landfill-crisis>. (accessed on 6 November 2024)

[11] <https://smartwatermagazine.com/blogs/helen-hulett/3ms-big-water-payout-south-africas-industry-next-line> (accessed on 5 November 2024)



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