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### **HAZMAT**

PFOA and PFOS have now been designated hazardous by the USEPA.<sup>1</sup>

PFAS chemicals are unlike other hazardous chemicals that HAZMAT has dealt with previously.

- The chemical class is persistent and does not break down naturally.
- They do not dilute – they expand the contamination area.
- Water resources have been contaminated by AFFF use for over 5 decades.
- They bioaccumulate.
- PFAS can be found in everyone's blood. Your body's systems and organs will contain PFAS from blood distribution.
- PFAS goes through bedrock, concrete, glass, plastics, your epidermis, etc.<sup>2 3 4</sup>
- "Four PFASs were associated with altered DNA methylation levels at specific genes. These results may indicate how PFASs are harmful to health and merit further exploration."<sup>5</sup>

Again, the fire service has been put into the unique position of contaminating their own communities and themselves without knowing.

#### Foam Exposure Committee | Vicki Quint

- 1 Foley & Lardner LLC, Linda Benfield, U.S. EPA Finalizes Designation of Two PFAS Chemicals as Hazardous Substances Under CERCLA, 24 April 2024, <https://www.foley.com/insights/publications/2024/04/us-epa-pfas-chemicals-hazardous-substances-cercla/>
- 2 ACS Publications, Visualization of the Distribution of PFOS and PFHxS in Concrete by DESI MSI, Phong H. N. Vo, April 19, 2023, <https://pubs.acs.org/doi/abs/10.1021/acs.estlett.3c00211>
- 3 ScienceDirect, Science of the Total Environment, Analyses of *per*- and polyfluoroalkyl substances (PFAS) through the urban water cycle: Toward achieving an integrated analytical workflow across aqueous, solid, and gaseous matrices in water and wastewater treatment, 20 July 2021, Lloyd J. Wincell, <https://www.sciencedirect.com/science/article/pii/S0048969721003235>
- 4 ACS, Environ. Sci. Technol., Insights into the Dermal Absorption, Deposition, and Elimination of Poly- and Perfluoroalkyl Substances in Rats: The Importance of Skin Exposure, Qiaoying Chen, Nov 23, 2022, <https://pubs.acs.org/doi/abs/10.1021/acs.est.2c03181>
- 5 Taylor & Francies, Per- and Polyfluoroalkyl Substances, Epigenetic Age and DNA Methylation: A Cross-Sectional Study of Firefighters, Jaclyn M Goodrich, 21 Oct 2021, <https://www.tandfonline.com/doi/abs/10.2217/epi-2021-0225>