PERFORMANCE FLUOROPOLYMER PARTNERSHIP

September 2, 2025

From: Jay West
Executive Director
Performance Fluoropolymer Partnership

To: Maine Department of Environmental Protection

Re: Chapter 90: Product Containing Perfluoroalkyl and Polyfluoroalkyl Substances (July 30, 2025)

Submitted via email to rulecomments.dep@maine.gov

Thank you for the opportunity to submit comments to the Maine Department of Environmental Protection (hereafter "the Department") on the proposed rule referenced in the subject line above on behalf of the American Chemistry Council's Performance Fluoropolymer Partnership.[1] The Partnership's members are some of the world's leading manufacturers, processors, and users of fluoropolymers, including fluoroelastomers, and polymeric perfluoropolyethers. The Partnership's mission is to promote the responsible production, use, and management of fluoropolymers, while also advocating for a sound science- and risk-based approach to their regulation.

We understand and appreciate that this rulemaking is focused specifically on designations for currently unavoidable uses (CUU) of intentionally added PFAS in products subject to sales prohibitions beginning January 1, 2026. We are concerned about the Department's approach to evaluating whether alternatives are reasonably available and would also like to take this opportunity to bring to the Department's attention a new resource that could inform its future work on PFAS.

Functionally equivalent. The definition of "functionally equivalent" in the Chapter 90 rule adopted in April of this year[2] is "a product or product component that functions in the same basic manner as the product it is being compared against to perform the same purpose to the same standard as the original PFAS containing product or product component it is being compared against."

It is our observation that, in the proposed denial of 9 of the 11 CUU petitions, the Department has not considered that functional equivalency includes the duration of a product's or product component's service life. How long a product lasts is integral to the purpose for which a substance is used and the standard of performance mandated in law, regulation, or performance standards or by users of the product. Alternatives with shorter service lives or diminished reliability are not "functionally equivalent."

[1] https://fluoropolymerpartnership.com/
[2] https://www.maine.gov/sos/sites/maine.gov.sos/files/inline-files/096c090.docx

We are concerned that we see early signs of a decision-making process that does not adequately consider service life in the evaluation of alternatives. Such a practice could foreseeably result in removal from commerce in Maine durable, long-lasting products or product components and replacement with alternatives with shorter service lives, more rapid replacement or turnover rates, and, as a consequence, potentially greater rates of material use and waste generation, as well as less resiliency, reliability, and safety. In short, not considering service life could result in regrettable substitutions.

We also observe that the definition of "reasonably available" in the previously referenced final rule includes the phrase "performs as well as or better than," and we do not see how the availability of potential alternatives with reduced service life and/or a lack of the performance attributes needed for reliability and safety comports with the definitions of "functionally equivalent" or "reasonably available." We strongly urge the Department to re-examine how it considers functional equivalence and reasonably available alternatives in the CUU proposals for which the Department has signaled its intention to deny and going forward.

New Peer-Reviewed Study on Environmental Fate and Transport. We would like to take the opportunity to make the Department aware of a new publication that examines the environmental fate and behavior of the fluoropolymer polytetrafluoroethylene (PTFE). The paper's conclusions, summarized briefly below, diverge significantly from frequent assertions and conjecture that fluoropolymers will degrade into non-polymeric, small molecule PFAS in wastewater treatment plants or landfills.[3]

In the series of experiments reported in the paper, a fine powder form of PTFE was assessed against a battery of validated, internationally recognized test methods to document the following properties and behaviors:

- Adsorption coefficient on soil and sludge
- Absorption-desporption
- Aerobic and anaerobic transformation in aquatic sediment
- Aerobic and anaerobic transformation in soil
- Biodegradation in aerobic sewage treatment
- Biodegradability in sea water
- Henry's Law constant
- Inherent biodegradability
- Melting point/range
- Number-average molecular weight and molecular weight distribution
- Octanol-air partition coefficient (log Koa)
- Partition coefficient (n-octanol/water)
- pH
- Phototransformation on soil surfaces
- Phototransformation in water by direct photolysis
- Ready biodegradability
- Solution/extraction behavior in water
- Stability in air
- Thermal stability
- Vapor pressure
- Water solubility

[3] Henry, B.J., and Timmer, N. 2025. Environmental fate and behavior studies of a polymeric PFAS, polytetrafluoroethylene (PTFE) – results and application to risk assessment. Chemosphere. 385:144569. https://doi.org/10.1016/j.chemosphere.2025.144569

The paper also provides information on 20 additional properties that have been suggested by various sources as potentially informative for polymer hazard assessment.

As a general matter, the study's authors note that PTFE "lacks the characteristics of molecules subject to passive or active transport into the cell or binding with cell surface receptors to signal changes within the cell." Regarding environmental fate and transport at the end of life, the tests demonstrate that PTFE would not contribute to elevated non-polymeric PFAS levels in wastewater or the solids harvested from wastewater treatment plants. The tests also show little likelihood of PTFE concentrating in any environmental compartment or being of concern due to potential concentration in plants. Most importantly, the authors conclude that there should be little concern about PTFE transforming in the environment to substances of concern.

The findings of the studies reinforce what we have said in multiple public comments to the Maine Legislature and the Department—all PFAS are not the same, and fluoropolymers are a group of PFAS that have properties making them of low concern for potential human or environmental risks.[4,5]

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Thank you again for the opportunity to provide these comments. We would be happy to meet with the Department to discuss any of our points in more detail.

Jay West
Executive Director
Performance Fluoropolymer Partnership

[4] Henry, B.J., Carlin, J.P., Hammerschmidt, J.A., Buck, R.C., Buxton, L.W., Fiedler, H., Seed, J. and Hernandez, O. (2018), A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers. Integr Environ Assess Manag, 14: 316-334, https://doi.org/10.1002/ieam.4035.
[5] Korzeniowski, S.H., Buck, R.C., Newkold, R.M., El kassmi, A., Laganis, E., Matsuoka, Y., Dinelli, B., Beauchet, S., Adamsky, F., Weilandt, K., Soni, V.K., Kapoor, D., Gunasekar, P., Malvasi, M., Brinati, G. and Musio, S. (2022), A critical review of the application of polymer of low concern regulatory criteria to fluoropolymers II: Fluoroplastics and fluoroelastomers. Integr Environ Assess Manag, https://doi.org/10.1002/ieam.4646.