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Submitted via email: rulecomments.dep@maine.gov

RE: Chapter 90: Products Containing Perfluoroalkyl and Polyfluoroalkyl Substances

We write on behalf of the Natural Resources Defense Council (NRDC). Thank you for the opportunity to provide comment on the Chapter 90 Proposed Rulemaking for Products Containing PFAS. Our comments focus primarily on definitions and Currently Unavoidable Uses.

Definitions

1. Intentionally added PFAS. As currently written, there is ambiguity in the note regarding intentionally added PFAS that should be clarified. It is unclear if the phrase "not present in the final product" is intended to modify both "PFAS used in the manufacturing process" and "PFAS that comes into contact with the product during the manufacturing process." The phrase "not present in the final product" should apply to both clauses, i.e. manufacturing uses should not be excluded unless there is no PFAS that result in the product.

   Therefore, we recommend the following edits:
   "Intentionally added PFAS includes degradation by-products serving a functional purpose or technical effect within the product or its components. Products containing intentionally added PFAS include products that consist solely of PFAS. Intentionally added PFAS does not include PFAS that is present in the final product as a contaminant, ~~or~~ PFAS used in the manufacturing process that is not present in the final product, or PFAS that comes into contact with the product during the manufacturing process but is not present in the final product."

2. Reasonably available. As we have previously shared with the Department in January 2025, the definition of "reasonably available" should be changed to better reflect the statute. In the draft rules, the Department proposed to define "reasonably available" with respect to alternatives as:
   "Reasonably available" means a PFAS alternative which is readily available in sufficient quantity and at a comparable cost to the PFAS, to include changes to the manufacturing

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process, it is intended to replace and performs as well as or better than PFAS in a specific application of PFAS in a product or product component."

The definition includes two problematic components.

- First, the criterion of "performs as well or better than PFAS in a specific application of PFAS" has no connection to the concept of a "reasonably available" alternative since it does not relate to availability. It's not clear why this criterion is being added to the consideration of the reasonable availability of alternatives. Performing as well or better than PFAS in a specific application is not necessary for an alternative to work and could unintentionally eliminate the ability to consider alternative materials, designs or processes (leaving only chemical drop-in replacements for consideration). For example, a safer alternative to stain resistant sprays for avoiding stains on upholstery could be the use of detergents or the use of fibers that are inherently stain resistant. These are completely different alternatives or approaches to the product and not just an alternative to the specific application of PFAS.

  Furthermore, the Maine statute includes a broad definition of alternative that is focused on the functional equivalence of the product (not just PFAS), and that is inclusive of other materials, designs, or processes. The definition expressly contemplates the removal of PFAS as an alternative, i.e., even if the alternative (no PFAS) does not perform as well or better than PFAS, as long, as the product still serves an equivalent function:

  "Alternative" means a substance or chemical that, if used in place of a PFAS in a product, would result in a ***functionally equivalent product*** *and would reduce the potential for harm to human health or the environment or that has not been shown to pose the same or greater potential harm to human health or the environment as the PFAS. "Alternative" includes: (1) A reformulated version of a product in which the intentionally added PFAS in the product has been removed; and (2) Changes to a product's manufacturing process that result in the removal of the PFAS from the product. [emphasis added]*

  The functional sufficiency of an alternative to PFAS use or the product is more appropriate to consider, especially in the context of implementing the essential use concept, particularly given the statutory language's focus on "product." "Functional substitution" is a method for identifying and evaluating alternatives to a substance that focuses on the function of the product and encourages a broader consideration of how this function can be achieved. For example, if focusing on the end use function of shopping receipts, harmful bisphenols in thermal paper could be eliminated by redesigning the paper itself or providing electronic receipts. Multiple papers and reports have described this important concept, including the European Chemicals Agency in its

"Strategy to promote substitution to safer chemicals through innovation."[1] Additionally, in the EU's guiding criteria and principles for the essential use concept it states that,

> *"Acceptable alternatives must be capable to provide the function and the level of performance that society can accept as sufficiently delivering the expected service and be safer … the assessment should not only consider possible alternatives with the same level of performance but also any alternative with a function and a level of performance that society can accept as sufficiently delivering the expected service. Therefore, the possible alternatives that need to be considered are:*
> *— products in the market in the same product category that do not use the most harmful substance;*
> *— the alternatives that have a lower performance, provided it is acceptable from the societal point of view (10);*
> *— those alternatives that provide a similar technical function and a similar level of performance to those provided by or with the most harmful substance"*

A product without PFAS need not perform as well or better than a PFAS-laden product in order to achieve the required function. For instance, Maine has previously phased out PFAS-containing firefighting foams for liquid fires even though those foams may act marginally more quickly to put out fires than PFAS-free alternative foams; however, the alternatives are just as successful at putting out fires, i.e. they are a "functionally equivalent product," and that is the key function.

- Second, a cost threshold is not appropriate in this context, because the cost implications can vary dramatically from product to product. Rather the focus should be on assessing what is "reasonably available." We believe that inquiry could involve considerations of adequate supply of the alternatives and potentially the cost to the public. Costs to manufacturers are variable and subject to market pressures, including the Department's actions. An alternative may initially start out significantly more expensive than the PFAS it is intended to replace, but as demand increases, the cost can fall rapidly, and a mandated switch away from PFAS could be the catalyst for demand for the alternative to

[1] Tickner, Joel A., Jessica N. Schifano, Ann Blake, Catherine Rudisill, and Martin J. Mulvihill. "Advancing Safer Alternatives Through Functional Substitution." *Environmental Science & Technology* 49, no. 2 (January 20, 2015): 742–49. https://doi.org/10.1021/es503328m.
Roy, Monika A., Ian Cousins, Elizabeth Harriman, Martin Scheringer, Joel A. Tickner, and Zhanyun Wang. "Combined Application of the Essential-Use and Functional Substitution Concepts: Accelerating Safer Alternatives." *Environmental Science & Technology* 56, no. 14 (July 19, 2022): 9842–46. https://doi.org/10.1021/acs.est.2c03819.
Cousins, Ian T., Jamie C. De Witt, Juliane Glüge, Gretta Goldenman, Dorte Herzke, Rainer Lohmann, Mark Miller, et al. "Finding Essentiality Feasible: Common Questions and Misinterpretations Concerning the 'Essential-Use' Concept." *Environmental Science: Processes & Impacts* 23, no. 8 (2021): 1079–87. https://doi.org/10.1039/D1EM00180A.
European Chemicals Agency. *Strategy to Promote Substitution to Safer Chemicals through Innovation: January 2018.* LU: Publications Office, 2018. https://data.europa.eu/doi/10.2823/99862.

increase. This is why it is important for cost considerations to not be determinative (and to have determinations of "currently unavoidable use" be time bound, as the availability of alternatives can change over time).

The need for any consideration of costs to be more focused on the impact to the public rather than the manufacturer is reinforced by the nature of alternatives that should be covered. As we propose above, the Department should adopt definitions that make clear that alternatives can include materials, processes, designs, products, or chemicals that achieve the desired result. In the example above where detergents are a viable alternative to PFAS treated upholstery, there would be little to no direct costs to the public, but there might be economic impacts for the manufacturer of the PFAS treated upholstery. Thus, the cost to the manufacturer should not be the relevant cost for the Department's analysis.

Furthermore, while there should be some consideration of the significance of additional cost to the public, minor costs should not influence the analysis. Even when considering costs to the public, a set threshold in absolute dollars should not be used as product categories may vary significantly in scale of cost. Nor is a percentage-based threshold appropriate because the significance of a certain percentage cost difference depends on the context–a high percentage could still amount to mere cents. In addition, any cost should be considered alongside societal costs of PFAS exposure and clean up.

We note that the statute makes no mention of cost.

In light of the above discussion, we recommend modifying the definition of "reasonably available" to remove extraneous and extra-statutory considerations to read as follows:

"Reasonably available" means an ~~PFAS~~ alternative ~~which is readily available in sufficient quantity and at a comparable cost~~ to the use of PFAS, ~~to~~ includ~~e~~ing changes to the manufacturing process, or to the product containing PFAS which is readily available in sufficient quantity or can become readily available in sufficient quantity in the relevant time frame~~it is intended to replace and performs as well as or better than PFAS in a specific application of PFAS in a product or product component~~."

3. Functionally equivalent. As currently written,

   "Functionally Equivalent" means 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.

We recommend removing the language "to the same standard." We agree that an alternative should serve the "same purpose" but disagree that an alternative needs to perform "to the same standard." As discussed above (and demonstrated by the firefighting foam example discussed) and detailed by the European Chemicals Agency, "*a level of*

performance that society can accept as sufficiently delivering the expected service" should be the focus when considering alternatives, especially when applying the essential use approach. A product without PFAS need not perform as well or better than a PFAS-laden product in order to achieve the required function.

In addition, given the consideration of alternative products and processes, an alternative may or may not "function in the same basic manner" as the original product or product component, e.g. paper vs. electronic receipts. This creates an unnecessary barrier to alternatives that is unsupported by the statutory language. We suggest modifying that language to focus on function.

Therefore, in light of the above discussion, we recommend modifying the definition to read as follows:
"Functionally Equivalent" means a product or product component that ~~functions in~~ provides the same basic ~~manner~~function 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.

Prohibition on Sale of Products Containing Intentionally Added PFAS

We support the Department's ban of products sold or distributed for sale in a fluorinated container, except for products that receive a currently unavoidable use exemption, as provided in subsection H and section 9(B). This will provide necessary protections to Mainers.

Currently Unavoidable Use

1. The language in 9(A)(2) states that a proposal for a CUU must contain *"an explanation of why the availability of PFAS in the specific product identified in subsection 1 is essential for health, safety or the functioning of society."* It then states that "*This may include or take the form of a description of the negative impact that would be caused by the unavailability of PFAS for use in the product and the subsequent unavailability or unsatisfactory performance of the product;*" However, this is not consistent with the definition in statute of "Essential for health, safety or the functioning of society" which specifies the particular impacts that should be considered and requires a showing *first* that the unavailability of PFAS would cause the product to be unavailable, stating that the:
   "unavailability of the PFAS for use in the product would cause the product to be unavailable, which would result in: (1) A significant increase in negative health outcomes; (2) An inability to mitigate significant risks to human health or the environment; or (3) A significant disruption of the daily functions on which society relies."

   Therefore, we recommend that the language in 9(A)(2) be reworded as follows:
   "An explanation of why the availability of PFAS in the specific product identified in subsection 1 is essential for health, safety or the functioning of society. This may include or take the form of a description of the negative ~~impact~~ health outcomes, the inability to mitigate significant risks to human health or the environment, or the significant disruption to

daily functions on which society relies that would be caused by the unavailability of PFAS for use in the product ~~and the~~ if the manufacturer has first shown that unavailability of PFAS for use in the product would cause the subsequent unavailability ~~or unsatisfactory performance~~ of the product;"

2. We are pleased to see that the consideration of alternatives to PFAS go beyond consideration of drop-in replacement chemicals.

   However, we recommend that Section 9(A)(4)(f) be amended to read:
   "An assessment of whether there are feasible changes to the manufacturing process of the product or changes to the product itself that would eliminate the need for PFAS."

   This would increase alignment with the definition of an alternative that is already in statute.

3. Subsection 9(A)(9) indicates that CUU requesters must also provide *"Any information known or reasonably ascertainable by the manufacturer regarding the impacts on human health or the environment of PFAS in the product"* and a list of minimum information required is provided. Inclusion of this information in the CUU request creates an unnecessary amount of work for the requesters and for the Department. Additionally, as is implied by the name, the essential-use approach is designed to aid policymakers in discontinuing any non-essential uses of chemicals of concern in products or processes where they are not critical for health, safety, or the function of society. The idea of the essential-use approach is not to perform analysis of levels of exposure or risk from particular uses of a chemical or chemicals of concern. Instead, it proposes that chemicals whose use poses a hazard to human health and the environment should only be used when absolutely necessary. The Maine legislature has already determined that any use of PFAS, especially when considering their lifecycle, is of serious concern and should be avoided whenever possible. Thus, requiring additional analysis of the impacts on human health or the environment of PFAS in the product would only create unnecessary reporting, analysis, and review without adding useful information for the purposes of the analysis.

   This data requirement is excessive and **all of Subsection 9(A)(9) should be struck from the regulation.**

4. We support the note regarding how the Department will handle claims of confidentiality. Neither the Department nor the public should have to guess where the PFAS can be found, and manufacturers and distributors should be obliged to share this information publicly.

5. Finally, we agree with the Board and the Department that requests submitted for CUU in the cookware category do not meet the statutory definition of essential for health, safety and the functioning of society and that alternatives are reasonably available. Specifically, we agree that PTFE for use in cookware, bakeware, and small kitchen appliances should not receive a CUU designation. There are many safer alternatives to PTFE coated cookware and bakeware available, including stainless steel, ceramic non-stick, carbon steel, glass, and

cast iron that are readily available and very cost competitive. We also agree with the Board and the Department that requests submitted for CUU for air care products, hand lotion container O-rings, and internal components of an upholstered massage chair do not meet the statutory definition of essential for health, safety and the functioning of society and that alternatives are reasonably available. Importantly, a ban on PFAS in these same products is already in effect in Minnesota as of January 1, 2025, where consumers have had no problems purchasing PFAS-free products.

We would be happy to discuss any of the information provided in our comments. For further details, please contact:

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