

**VIA ELECTRONIC TRANSMISSION TO rulecomments.dep@maine.gov**

Ms. Kerri Malinowski  
Maine Department of Environmental Protection, Office of the Commissioner  
17 State House Station  
32 Blossom Lane  
Augusta, Maine 04333-0017

May 19, 2023

**RE: Comments on Posting Draft: Chapter 90: Products Containing Perfluoroalkyl and Polyfluoroalkyl Substances**

Dear Ms. Malinowski:

We appreciate the opportunity to work with you and the Department of Environmental Protection to address the important issue of PFAS (per- and polyfluoroalkyl substances) in Maine. At Ford, we believe that our purpose is bigger than building vehicles. We are helping to build a better world where every person is free to move and pursue their dreams. To achieve our goals, we must build a strong, sustainable business that advances ground-breaking technology, supports people, and protects our planet for generations to come. Ford Motor Company has a long history of sustainable corporate action and are committed to future actions for a sustainable future. These include sourcing 100% carbon-free electricity for our global manufacturing efforts by 2035, reaching true zero waste to landfill across our operations, eliminating single-use plastics from our operations by 2030 and utilizing only recycled or renewable content in vehicle plastics.

Ford applauds DEP's efforts to address harmful contaminants that pose a significant threat to the environment of the State and to the health of its citizens. However, the State of Maine not only has the most stringent PFAS law in the United States, but in the entire world. We believe there are ways to achieve our mutually ambitious goals of protecting the environment and human health while maintaining our sustainable business objectives. Vehicles are complex durable goods that are expected to meet high performance standards after meeting a litany of federal safety, environmental, and fuel economy regulations. Producing vehicles is an extremely complex process, as they contain as many as 30,000 component parts, at the lowest component level. Our supply chain is similarly complex, with several tiers of suppliers aiding in the production of a single vehicle line, with each tier supplying materials to the tier of suppliers above. For the first time in history, Ford is working to develop approaches to identifying PFAS in our global vehicle supply chain amongst all tiers. PFAS is used in the automotive industry because it has important properties such as retarding heat and water to protect consumer safety while also providing critical functionality in vehicles to meet evaporative and tailpipe emissions standards. Specific examples of PFAS use include wire coatings, which help reduce engine compartment fires, as well as chemical- and heat-resistant gaskets and O-rings, improving the reliability of engine and brake system functionality. From engines and brakes to fuel components and electronics, most modern automotive systems rely on PFAS' durability and resistance to heat, chemicals and abrasion and vapor-barrier characteristics.

It is in this mindset that we work to comply with all applicable federal, state and local laws and work to achieve both a sustainable environment and sustainable business model in relation to the use of PFAS. Evaluating the 10,000-plus PFAS substances as individual chemistries or subcategories, and not as a class, will help lead to prioritizing the focus on the most harmful substances and exposure risks for DEP's notification requirements. The sheer scope and complexity of identifying all PFAS in the intricate global automotive supply chain is practically insurmountable. Two such lists that could be helpful are the

EPA's Contaminant Candidate List (CCL 5) and Unregulated Contaminant Monitoring Rule (UMCR) that list PFAS (by CAS number) of interest to be monitored for regulation under the Safe Drinking Water Act. Working to identify specific compounds of interest will also help Maine DEP and the automotive industry identify those PFAS substances that are essential for health, safety, or the functioning of society for unavoidable use determinations.

Sec. 3(A) requires notification to DEP of products for sale with PFAS beginning January 1, 2023. Given the complexity of the automotive supply chain, the reporting timeline should be extended until at least January 1, 2025. Currently, there is no commercially available methodology to identify an exact quantity of PFAS in an automotive part and the majority of the PFAS data that Ford will be submitting will be coming from our thousands of suppliers. This extension will give us, and them, adequate time to comply with the reporting requirements as we begin to circulate these new requirements with our supply base (see attached RSMS letter and PFAS list), and they filter down from our Tier 1 suppliers to the Tier 2 & Tier 3 suppliers. Additionally, this gives the Maine DEP adequate time to work with stakeholders on developing the online notification system. Our goal is to be able to report accurate values from the outset of this regulation, and additional time will better allow for us to collect the necessary reliable data from our suppliers and work with the Maine DEP on a straightforward reporting format that works for all parties.

Sec. 3(A) of the rule indicates that reporting requirements do not apply to used products. Ford recommends that DEP specifically exempt legacy service parts from reporting, either by including such an exemption in the text, or through a written determination that legacy service parts intended to repair vehicles that would classify as "used" should themselves also be considered "used" and exempt from reporting. Currently Ford offers for sale on parts.ford.com hundreds of thousands of replacement parts from brake light sockets to seatbelts that are essential to the maintenance and repair of in-service vehicles so that they remain safe and reliable. Reporting PFAS content for legacy replacement parts produced years ago (replacement parts are usually manufactured at the same time as the original vehicle, with the average age of a vehicle being 12 years old) would be impossible. Many of these parts we simply do not have PFAS data as they predate regulatory interest in PFAS and the IMDS database so we would not be able to track down as it was not provided to us at the time of production. Parts that are included in Ford vehicles are sourced from thousands of suppliers (commonly referred to as Tier 1) some of which source from multiple suppliers (commonly referred to as Tier 2) of their own to fill orders. It is not uncommon for suppliers to go out of business giving us no legal entity to go back to and request PFAS data.

Sec. 3(A)(1)(a) of the Rule outlines notification requirements by Global Product Classification (GPC) brick category. Ford supports the GPC Brick code a category of products for the auto industry's notification requirements. Currently, the applicable GPC down to the Brick level for the auto industry would be Brick 10006374 "Cars/Vans/Sport Utility Vehicles/Light Trucks." Our recommendation is that Ford Motor Company would make one notification to the Department of our PFAS substance levels to cover all vehicles. As a result of the Maine PFAS law, the U.S. Center for Automotive Research (USCAR) recently conducted a study to analyze the presence of PTFE, thought to be the most commonly used PFAS in automotive components. The study included 36 different types of vehicles from seven automakers and found that all vehicles in the study would satisfy the criteria in the draft DEP Rule: that a product falls within the same GPC brick code, the same PFAS compound is present in every product, and is present in every product in a substantially similar amount. This is incredibly important for the auto industry, as it minimizes duplicative data by eliminating model and component level reporting for approximately 80 individual vehicle model registrations and over 10,000+ component registrations for replacement parts and vehicle accessories. Expanding on this initial study, USCAR is continuing to collect data on additional PFAS substances leveraging the same vehicles and data parameters outlined in the PTFE study. PFAS substances to be included in the ongoing study were identified based on IMDS

Global Impact Report results that yielded a high number of auto manufacturers' affected parts (>20,500). Results are expected later this summer.

Sec. 3(A)(1)(c) of the Rule outlines notification requirements, including the amount of PFAS as a concentration, identified by name and its chemical abstracts service (CAS) registry number. Ford supports this notification requirement. Ford maintains a Global Restricted Substance Management Standard (RSMS) that works in conjunction with the International Materials Data System (IMDS) that is used by the automotive industry as a globally centralized web-based system to report substance content on parts and materials in a vehicle. Today, we prohibit over 10,000 PFAS compounds in Ford Motor Company products (see attached list) and are working to identify which additional PFAS are present in critical automotive components. Reviewing PFAS substances by CAS number is helpful to the automotive industry because it gives us targeted compounds to assess for removal from our products based on their potential to cause harm to people and the environment. Thus far, we have identified 14 CAS numbers associated with vehicle component parts that are reported back to Ford at a measurable quantity through the IMDS system. It's important to note that none of these 14 CAS numbers appear on either of the EPA's CCL 5 or UMCR lists for water quality monitoring, indicating that they are not a priority for monitoring at the federal level.

Ford also recommends that during the reporting extension timeline, Maine DEP work with automotive manufacturers to adopt appropriate concentration reporting ranges for all PFAS compounds per section 3.C.(3)(b) of the regulation. For example, in the USCAR study, as percentage of vehicle weight the maximum PTFE value identified was 0.055% and the average was 0.006%. PTFE was assumed to be the most prevalent form of PFAS in automotive component parts, which Ford confirmed in the expanded study. We found that the total weight of the additional 14 PFAS compounds (that had a CAS #) studied plus PTFE averaged 0.054% by weight of the vehicle. Based on these initial findings it is highly likely all other PFAS not included in this study that are intentionally added will be in much lesser quantities and could be reported as 0.0% to 0.055% simplifying the reporting process for all.

Alternative approaches in which PFAS to report, such as total organic fluorine determination, we believe would go against the goals of the proposed PFAS regulation and create more work for both the Department of Environmental Protection and for companies responsible for reporting PFAS in their products. For PFAS we identify without an exact quantity; reporting on the total organic fluorine would be unreasonable for the auto industry, as it would require suppliers to test and measure all forms of PFAS (both known and unknown forms) in individual vehicle components, some of which may have no commercially available test method. This might be reasonable for specific product types, especially those with high human health exposure risks, such as food packaging, dust, carpeting and fabric, with testing methods typically reserved for detecting the presence of PFAS in soil and water. It is highly unknown at best if product suppliers will be able to detect the presence of total organic fluorine in all individual automotive product components. Furthermore, giving a total organic fluorine result for a product gives no indication of the potential for harm to the environment that you would get by identifying specific PFAS by CAS number in products.

As part of our initial efforts to identify PFAS in vehicle components, we are also becoming aware of PFAS in critical products and components where no suitable alternative exists. For example, Polyvinylidene fluoride (PVDF, CAS 24937-79-9) is a polymer used as a binder and coating for separators in lithium-ion batteries for electric vehicles. **To our knowledge, there is no commercially available technology that exists in the world today which would allow for the production of electric vehicle batteries without PVDF.** Another critical product we utilize that would be banned under this rule is our refrigerant R1234yf (CAS 754-12-1) which we are being directed to use under the American Innovation and Manufacturing (AIM) Act as part of the global hydrofluorocarbon phasedown. Currently there is no viable production alternative on the market for our vehicle A/C systems. Finally, FKM

(commonly called fluorine rubber or fluoro-rubber) is used extensively on engine and fuel system components to prevent evaporative emissions into the environment which are necessary to satisfy federal and state regulatory requirements. FKM also has no suitable production alternative. These are crucial elements of vehicles today, and especially as we transition to an electrified future with additional more stringent regulatory emissions standards. We recognize that products that contain a currently unavoidable use of PFAS will be subject to a future rule making, however it is important to identify these now especially as the use of these components relate to climate mitigation and the essential functioning of society.

In closing, Ford Motor Company supports DEP's efforts to reduce exposure to PFAS and protect public health and the environment. As the DEP considers a working group to further examine complex products and compliance with a new rule, we recommend the inclusion of the Alliance for Automotive Innovation to serve on behalf of the auto industry. We appreciate the opportunity to work collaboratively with the Department and are committed to finding workable solutions.

Should you have any questions or comments regarding our response, please feel free to contact me or Steve Henderson (shenders@ford.com). We would be happy to be a resource.

Kind Regards,

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