

May 18, 2023

Via Email

Mr. Mark Margerum

Mark.T.Margerum@Maine.gov

Maine Department of Environmental Protection

17 State House Station

Augusta, ME 04333-0017

Re: Comments on Proposed Rule

06-096 ch. 90 Products Containing Perfluoroalkyl and Polyfluoroalkyl Substances

Dear Mr. Margerum:

Baker Hughes (NASDAQ: BKR) is pleased to offer our comments to the Maine Department of Environmental Protection (DEP) on the above referenced proposed rule governing products containing Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS). Baker Hughes is an energy technology company providing products and solutions for energy and industrial customers in the state of Maine and worldwide. Our products include industrial monitoring equipment, drilling equipment, control systems, valves, pumps, compressors, and turbines. Many of our products are used for industrial asset monitoring to ensure the safe, reliable, and efficient operation of industrial equipment in power plants, transportation infrastructure, manufacturing plants, and other industrial operations. For the purposes of our comment these industrial tools, equipment, and products are collectively referred to as "Industrial Products."

Many of the Industrial Products that we manufacture are comprised of multiple items and components, some of which contain fluoropolymers, which are broadly classified as PFAS. This includes O-rings, wire and cable insulation, and seals that are made with PFAS substances because they are highly durable in harsh environments. The items and

components that contain PFAS substances that are in our products are typically in the form of plastic or rubber and fastened or contained within the product. Additionally, our products are industrial equipment that have a long service life, and which are upgraded, refurbished, and returned to service. These products are not routinely disposed of in landfills.

As explained in more detailed below, Baker Hughes recommends that the Department establish a classification and special disclosure schedule for industrial products that are essential for the health, safety, and functioning of society, which we refer to as “Essential Industrial Products.” These include products that are essential for needs such as power generation, transportation, manufacturing, and safety.

For example, our Waygate Technologies business segment designs and manufactures non-destructive testing equipment that are essential for the maintenance of safe operating conditions for many industries and transportation infrastructure. This is large electronic equipment that contains thousands of components, some of which may contain PFAS substances. Our testing equipment performs ultrasonic and remote visual inspection of welds on bridges during construction and in-service inspection, critical to safety components on transportation vehicles (cars, trucks, trains, and planes), power plant vessels and piping systems, pipelines, and wind energy.

In many cases, Industrial Products, such as the Waygate Technologies testing equipment, contain several components that include PFAS substances and, unlike stain repellants that can wash away, these components are built into the project and are not likely to be released to the environment.

Because component level PFAS disclosure is in its infancy, PFAS disclosures from our suppliers are lacking or incomplete. To allow for supply chain transparency to mature, especially for complex industrial products, we recommend adopting a measured and incremental approach to PFAS notification for a new classification of products that are referred to as “Essential Industrial Products.” Under this approach, we suggest starting with a product-level disclosure, and then to the extent that the specific information is

known to or reasonably ascertainable by the manufacturer, phase in a component-level and substance-level disclosure. This approach will enable the Department to implement the notification requirements of the 2021 PFAS Law, as codified in 38 M.R.S. § 1614, and establish a reasonable pathway for manufacturers and distributors to enhance disclosures over time.

SPECIFIC COMMENTS ON THE PROPOSED RULE

COMMENTS ON SECTION 2 – DEFINITIONS

1. *Unavoidable Use*

- a. **Comment:** The development of PFAS substances for industrial and aerospace applications dates to the 1950s and took years, if not decades, to design and develop the PFAS substances that are currently in use. After development of the chemistry, the products that are made with the chemistry, i.e. the PFAS substances, must be tested and certified for fit and purpose. The testing and certification phase takes several years. To allow for the development, testing and certification of new chemistries that will replace the specific PFAS substances, we recommend clarifying the definition of definition of “unavoidable use” to explain that it will be necessary to continue to use PFAS substances because of their thermal and chemical resistant properties until suitable replacement chemistries can be developed and certified for use. We suggest adding the underlined sentence in the proposed definition.

Currently unavoidable use. “Currently unavoidable use” means a use of PFAS that the Department has determined by rulemaking to be essential for health, safety, or the functioning of society and for which alternatives are not reasonably available because replacement materials have not been developed and certified for the purpose for which they are used.

2. Essential for Health, Safety, or the Functioning of Society

- a. **Comment:** There are many products and devices that may contain rubber or plastic that contain PFAS substances. We recommend clarifying that this definition includes products or product components that ensure the safe and reliable operations of infrastructure, manufacturing and power plants. We suggest adding the underlined sentence in the proposed definition.

Essential for Health, Safety, or the Functioning of Society. “Essential for Health, Safety or the Functioning of Society” means products or product components that if unavailable would result in a significant increase in negative healthcare outcomes, an inability to mitigate significant risks to human health or the environment, or significantly interrupt the daily functions on which society relies. Products or product components that are Essential for Health, Safety or the Functioning of Society include those that are required by federal or state laws and regulations. Essential for the Functioning of Society includes but is not limited to climate mitigation, critical infrastructure, safe operations of municipal infrastructure, transportation infrastructure, aerospace industry, manufacturing plants, and power generation stations, delivery of medicine, lifesaving equipment, public transport, and construction.

3. Reasonably available

Comment: Items and components that are used in industrial equipment often contain rubber and plastics that are made with PFAS substances because of the specific qualities that these materials provide in harsh environments. While there are efforts underway to develop replacement materials, there are currently no alternatives or replacement materials that have similar performance characteristics, which is the ability withstand harsh environments, including high temperatures and resistant to chemicals. While there may be gaskets, seals and O-rings on the market in sufficient quantities and comparable costs, these products may not have suitable performance

characteristics. As such, we recommend clarifying the definition of “reasonably available” to include performance and reliability characteristics. We suggest the following edits to the proposed definition.

Reasonably available. “Reasonably available” means a PFAS alternative which is readily available in sufficient quantity and at a comparable cost to the PFAS it is intended to replace and meets the technical performance standards of ~~performs as well as or better than PFAS in~~ a specific application of PFAS in a product or product component.

4. Known to or Reasonably Ascertainable by (New Definition)

a. Comment: Complex products contain numerous components that are obtained from numerous suppliers and a complex supply chain. Some of these components may contain a PFAS substance or be manufactured in a process that uses PFAS substances. This information is not always available to the product manufacturer on the grounds that this information is proprietary or that the supplier does not have the detailed information. As result, product manufactures may not have component- or substance level information on PFAS. In these cases, we recommended that the notification requirements be limited to when the information is known to or reasonably ascertainable by the manufacturer. Congress recognized this information gap when drafting the reporting requirements of the Toxic Substance Control Act (“TSCA”) when it conditioned detailed reporting “insofar as reasonably ascertainable.” See 15 U.S.C § 2607(a)(2). As such, we recommend adding this definition to the rule and, as presented below, incorporating this approach for the notification provisions for Essential Industrial Products, as defined below.

“Known to or reasonably ascertainable by” means all information in a person's possession or control, plus all information that a reasonable person similarly situated might be expected to possess, control, or know.

5. Essential Industrial Products (New Definition)

a. Comment: There are many products that are essential for the safe and reliable operations of municipal and industrial facilities. These products include, but are not limited to, flow control devices, measuring and monitoring devices, and control systems. These products are manufactured with numerous components, some of which may contain PFAS substances. These components, those with and without PFAS substances, are embedded and/or enclosed within the product. These components are also sourced from multiple suppliers and currently there is an inconsistent and, in some case, an incomplete accounting of detailed information on the type and amount of PFAS substances in those components. To allow for the supply chain transparency to mature, we recommend an incremental approach for the Section 3.A notification requirements for “Essential Industrial Equipment” and proposed a definition of this class of products. The proposed definition is as follows:

Essential Industrial Products. “Safety Related Industrial Products” means products that are Essential for Health, Safety, or the Functioning of Society and ensure the safe, reliable, and efficient operation of industrial equipment in power plants, municipal infrastructure, transportation equipment and infrastructure, aerospace industry, manufacturing plants, energy generation facilities, and other industrial operations.

COMMENTS ON SECTION 3 - NOTIFICATION

1. Section 3.A(1) – Notification Requirements

a. Comment: Essential Industrial Products are comprised of hundreds or thousands of individual components, some of which are made with PFAS substances. As we do not manufacture all the individual components, we must rely on our suppliers to disclosure whether their components contain PFAS substances.

As component level PFAS disclosure is in its infancy, we do not always get this information from our suppliers. In some cases, our suppliers refuse to disclose their component details on the grounds of business confidentiality and proprietary claims. In other cases, our suppliers are not accustomed to disclosing this level of detail to their customers. In summary, in many cases substance-level information is not reasonably ascertainable and thus should not be required for disclosure.

Because of this we don't always have detailed knowledge of each and every component in the Essential Industrial Product that may contain PFAS substances, the chemical abstract service (CAS) registry number for the type of PFAS substance that is contained in each component, or any way to determine the exact quantity that may be in a component.

Congress recognized this information gap when drafting the reporting requirements of the Toxic Substance Control Act ("TSCA") when it conditioned detailed reporting "insofar as reasonably ascertainable." See 15 U.S.C § 2607(a)(2).

Due to the current challenges of obtaining component level PFAS information and quantities and the fact that this information may not be known or reasonably ascertainable, we recommend that the Department consider TSCA's method for reporting by adopting a limited and incremental approach to the notification requirements for Essential Industrial Products that are Essential for Health, Safety, or the Functioning of Society. Based on this rationale, we recommend the following changes to Section 3.A.:

- 3.A (b) With the exception of Essential Industrial Products, the purpose for which PFAS are used in the product, including PFAS in any product component;
- 3.A (c) With the exception of Essential Industrial Products, the amount of each of the PFAS as a concentration, identified by name and its chemical abstracts

service (CAS) registry number, of each PFAS in the product or any product component reported as an exact quantity determined using commercially available analytical methods, or as falling within a range approved by the Department;

3.A (d) For Essential Industrial Products, the following disclosure schedule shall apply:

(i) For the three years after the effective date of this rule, the manufacture shall disclose whether the product contains PFAS substance(s), generally, and if known to or reasonably ascertainable by the manufacturer, the purpose for which the PFAS substance is used.

(ii) Beginning on the four-year anniversary of the effective date of this rule, and if the information is known to or reasonably ascertainable by the manufacturer, the manufacture shall provide a component-level disclosure of the PFAS containing components in the product.

(iii) Beginning on the sixth-year anniversary of the effective date of the rule, and if the information is known to or reasonably ascertainable by the manufacturer, the manufacture shall provide the amount of each of the PFAS as a concentration, identified by name and its chemical abstracts service (CAS) registry number, of each PFAS substances in the product or any product component reported as an exact quantity determined using commercially available analytical methods, or as falling within a range approved by the Department.

COMMENTS ON SECTION 4 – EXEMPTIONS

1. Section 4.A Exempt Products

- a. **Comment:** Industrial Products that are reclaimed and refurbished by the product manufacturer should be exempt from the requirements of this chapter because these products are not disposed of in the State of Maine and therefore will not have any impact on the environment. Suggest adding a second paragraph to this section as follows:

(2) A product that is reclaimed and refurbished by the manufacturer and is not disposed of at municipal solid waste landfills.

We appreciate the opportunity to comment on this proposed rule and the opportunity to continue to participate in the rulemaking process. Please contact me or Antonio Clemente at Antonino.Clemente@Bakerhughes.com if there are any questions with respect to these comments.

Sincerely,

Joseph M. Dawley

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