

Date: March 11, 2021

To: The Honorable Sen. Virginia "Ginny" Lyons, *Chair*
Senate Committee on Health and Welfare
115 State Street
Montpelier, VT 05633

cc: Sen. Ruth Hardy, Vice Chair
Sen. Ann Cummings
Sen. Cheryl Hooker
Sen. Joshua Terenzini, Clerk
Nellie Marvel, Committee Assistant

From: Martin Wolf
Director, Sustainability & Authenticity
Seventh Generation, Inc.
Burlington, VT 05401

RE: Testimony in support of S.20 An act relating to restrictions on perfluoroalkyl and polyfluoroalkyl substances and other chemicals of concern in consumer products

Dear Sen. Lyons:

On behalf of Seventh Generation, thank you for this opportunity to testify *in support* of S.20 An act relating to restrictions on perfluoroalkyl and polyfluoroalkyl substances and other chemicals of concern in consumer products

Seventh Generation is the nation's leading brand of household and personal care products designed to help protect human health and the environment. Established in 1988, our Burlington, Vermont based company employs over 160 people, distributing products to natural food retailers, supermarkets, mass merchants, and online retailers across the United States and more than 20 other countries.

Among the products manufactured and sold by Seventh Generation are laundry detergents, dish detergents, hand soaps, recycled household paper products, baby diapers, baby wipes, and feminine hygiene products.

In October 2016, Seventh Generation was acquired by Unilever, a global manufacturer of consumer products dedicated to making sustainable living commonplace.

In presenting this testimony, I come before you as a senior employee of one of Vermont's successful, socially responsible businesses, as a chemist, which science I have studied and practiced most of my adult life, as a father, and as a citizen of the State of Vermont who values the health of our people, our State's natural beauty, and the delicate balance we are striving to achieve between maintaining that health, that beauty, and our economic vitality.

As noted in Vermont Act 188, Chapter 38a. Chemicals of High Concern to Children, § 1771, "It is the policy of the State of Vermont:

(1) to protect public health and the environment by reducing exposure of its citizens and vulnerable populations, such as children, to toxic chemicals, particularly when safer alternatives exist;"

BACKGROUND

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are substances widely used to manufacture non-stick, grease and stain-resistant coatings in a variety of industrial and consumer products, including food packaging, non-stick cookware, carpets and upholstery, ski wax, floor wax, outdoor gear, dental floss and firefighting foams.¹

PFAS HAVE SPREAD THROUGHOUT OUR ENVIRONMENT

PFAS are found in the blood of more than 98% of Americans² and contaminate the drinking water sources for more than 16 million Americans, including large numbers of Vermonters.³ PFAS released to the environment have been shown to travel around the globe⁴ and bioaccumulate and biomagnify.⁵ They are found virtually everywhere in water, air and terrestrial environments, including locations far from points of release. They are present in indoor dust, air, food and wildlife; and have also been found in the milk and serum of breastfeeding women.⁶

PFAS PERSIST IN THE ENVIRONMENT

In 2009, PFASs were listed as persistent organic pollutants under the Stockholm Convention due to their ubiquitous, persistent, bioaccumulative, and toxic nature.^{7,8}

PFAS CAUSE HARM

Health effects from PFAS exposure include hormone disruption,⁹ immune system effects,¹⁰ high cholesterol, thyroid disease, hypertension,¹¹ lowered sex and growth hormones in children,¹² and altered mammary gland development.¹³

PFAS are literally the genie that cannot be put back in the bottle. Once they enter the environment they will cause harm for hundreds, perhaps thousands, of years.

Regarding Sec. 1. 18 V.S.A. CHAPTER 33. FIREFIGHTING AGENTS AND EQUIPMENT

The risks to human health and the environment of using PFAS were established in the Background section of this document. The wisdom of banning PFAS in firefighting agents and equipment is, therefore, clear.

PFAS-free Class B firefighting foams are available

In April 2019 the Interstate Chemical Clearinghouse (IC2) reported that New Zealand, the Australian states of South Australia and Queensland, the U.S. Federal Aviation Administration (FAA) and the State of Washington have, or will soon, ban fluorinated firefighting foams.¹⁴ Over 90 fluorine-free water additives from 22 manufacturers were identified and tabulated with relevant data including performance specifications and disclosed ingredients in the product.¹⁵ A report from the Washington State Department of Ecology, lists over 90 PFAS-free Class B firefighting foams that have been certified for use. The report is attached to this testimony.

Therefore there is no credible reason to manufacture, sell, offer for sale, or distribute Class B firefighting foams that contain PFAS in the State of Vermont, unless required by Federal law.

Regarding Sec. 2. 18 V.S.A. CHAPTER 33A. CHEMICALS OF CONCERN IN FOOD PACKAGING

The risks to human health and the environment of using PFAS were established in the Background section of this document. The wisdom of banning PFAS in food contact

packaging is, therefore, clear. Section 2 of this bill extends sale and use restrictions in food packaging to two additional substances, bisphenols and phthalates, two other substances known to harm human health.

PFAS-free food service ware are available

Alternatives to PFAS-treated food packaging ware are also available and are often less expensive. Paperboard coated with clays, waxes, polyethylene, or polylactic acid are available. Many are compostable or recyclable. New York State procurement guidelines currently restrict purchase of food service ware treated with PFAS, and New York State Legislature passed legislation (S.8817 and A.4739-C) that bans PFAS in food packaging sold or distributed in the state effective in 2023.-A report prepared by the Northwest Green Chemistry Council identifying alternatives to PFAS-coated food service ware is attached to this testimony.

Therefore there is no credible reason to manufacture, sell, offer for sale, or distribute food service ware that contain PFAS in the State of Vermont.

Regarding Sec. 3. 18 V.S.A. CHAPTER 33B. RUGS, CARPETS, AND AFTERMARKET STAIN AND WATER RESISTANT TREATMENTS

The risks to human health and the environment of using PFAS were established in the Background section of this document. The wisdom of banning PFAS in rugs, carpeting, and aftermarket stain and water resistant treatments is, therefore, clear.

PFAS-free rugs, carpets, and aftermarket stain and water resistant treatments are available

Sale of rugs and carpets treated with PFAS is already restricted at progressive retailers that offer “PFAS-free” alternatives with dirt-repelling properties. As more rugs and carpets are recycled, keeping persistent, bioaccumulating, toxic substances out of newly manufactured products becomes increasingly important. Restricting the use of PFAS today will prevent the contamination of future generations with these substances.

Therefore there is no credible reason to manufacture, sell, offer for sale, or distribute rugs, carpets, or aftermarket stain and water resistant treatments that contain PFAS in the State of Vermont.

Regarding Sec. 4. 18 V.S.A. CHAPTER 33C. PFAS IN SKI WAX

The risks to human health and the environment of using PFAS were established in the Background section of this document. Ski wax use contributes to environmental contamination by PFAS.¹⁶ The wisdom of banning PFAS ski wax is, therefore, clear.

PFAS-free ski waxes are available

Hydrocarbon ski waxes that are PFAS-free have been available for decades. They have been used by generations of Vermont skiers to satisfactory effect.

Therefore there is no credible reason to manufacture, sell, offer for sale, or distribute ski waxes that contain PFAS in the State of Vermont.

Regarding Sec. 5. 18 V.S.A. § 1773 CHEMICALS OF HIGH CONCERN TO CHILDREN

As a manufacturer of baby diapers and baby wipes Seventh Generation appreciates including, by statute, PFAS in the list of chemicals of high concern in children's products.

Children are particularly vulnerable to the effects of substances such as PFAS chemicals. I am not aware of any children's product that necessitates the use of PFAS.

In Conclusion

Seventh Generation and other responsible businesses already exclude thousands of chemicals of concern, including PFAS, bisphenols, and phthalates, from their formulation pallets. We will not use, and there is no need for us to use, substances that are known or likely to cause cancer, to express reproductive toxicity, or to be persistent, bioaccumulating, and toxic.

By prohibiting the use of PFAS in firefighting foam, food packaging, rugs, carpets, and aftermarket treatments, ski waxes, and children's products, Vermont would protect our public health and our environment and fulfill the policy of the state to reduce exposure of its citizens and vulnerable populations such as children, to toxic chemicals, particularly when safer alternatives exist.

Thank you for your attention to, and consideration of, these comments.

Respectfully submitted,



Martin Wolf

Director, Sustainability & Authenticity

Seventh Generation, Inc.

¹ California Environmental Protection Agency, Department of Toxic Substances Control (Cal/EPA DTSC), Safer Consumer Products Program, *Product – Chemical Profile for Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) in Carpets and Rugs*, February 2018

² Calafat et al. 2007. *Polyfluoroalkyl Chemicals in the U.S. Population: Data from the National Health and Nutrition Examination Survey (NHANES) 2003–2004 and Comparisons with NHANES 1999–2000*. *Environ Health Perspect.* Nov; 115(11): 1596–1602.

³ Hu et al. *Detection of Poly- and Perfluoroalkyl Substances (PFASs) in U.S. Drinking Water Linked to Industrial Sites, Military Fire Training Areas, and Wastewater Treatment Plants*; *Environ. Sci. Technol. Lett.* 2016, 3, 344–350; DOI: 10.1021/acs.estlett.6b00260

⁴ Giesy and Kannan, 2001, *Global Distribution of Perfluorooctane Sulfonate in Wildlife* *Environ. Sci. Technol.* 35(7):1339-1342

⁵ Conder et al., *Are PFCA's bioaccumulative? A critical review and comparison with regulatory criteria and persistent lipophilic compounds*. 2008, *Environ. Sci. Technol.* 42 (4): 995-1003

⁶ Cal/EPA DTSC 2018, *Ibid.*

⁷ Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, et al. (May 2015). ["The Madrid Statement on Poly- and Perfluoroalkyl Substances \(PFASs\)"](#). *Environmental Health Perspectives.* 123 (5): A107-11. doi:10.1289/ehp.1509934. PMC 4421777. PMID 25932614.

⁸ ["Stockholm Convention Clearing"](#). chm.pops.int. Secretariat of the Stockholm Convention. Retrieved 26 October 2016

⁹ Henry ND et al. 2013. *Comparison of in vitro cytotoxicity, estrogenicity and anti-estrogenicity of triclosan, perfluorooctane sulfonate and perfluorooctanoic acid.* *J Appl Toxicol.* Apr;33(4):265-72.

¹⁰ Grandjean et al. 2017. *Serum Vaccine Antibody Concentrations in Adolescents Exposed to Perfluorinated Compounds*. *Environ Health Perspect.* Jul 26;125(7):077018.

¹¹ www.c8sciencepanel.org

¹² Lopez-Espinosa MJ, Mondal D, Armstrong BG, Eskenazi B, Fletcher T. 2016. *Perfluoroalkyl Substances, Sex Hormones, and Insulin-like Growth Factor-1 at 6-9 Years of Age: A Cross-Sectional Analysis within the C8 Health Project*. *Environ Health Perspect.* 124(8): 1269-1275.

¹³ White SS, et al. *Gestational and Chronic Low-dose PFOA Exposures and Mammary Gland Growth and Differentiation in Three Generations of CD-1 Mice*. *Environ Health Perspect.* 2011 Aug;119(8):1070-6. DOI: 10.1289/ehp.1002741

¹⁴ New York State Pollution Prevention Institute, Rochester Institute of Technology, April 2019, "Per- and Polyfluorinated Substances in Firefighting Foam"

¹⁵ New York State Pollution Prevention Institute, *Ibid.*

¹⁶ Carlson, GL and Tupper, S. *Ski wax use contributes to environmental contamination by per- and polyfluoroalkyl substances*, *Chemosphere* 261 (2020) 128078.