

PREPUBLICATION COPY NOTICE:

The Director of the Office of Pollution Prevention and Toxics signed the following proposed rule on August 7, 2012:

Perfluoroalkyl Sulfonates and Long-Chain Perfluoroalkyl Carboxylate Chemical Substances; Proposed Significant New Use Rule [FRL 9358-7]

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Once the official version of the document publishes in the *Federal Register*, the prepublication version of the document that is posted on the internet will be replaced with a link to the document that appears in the *Federal Register* publication. At that time, you will also be able to access the on-line docket for this document at <http://www.regulations.gov>, using **Docket ID Number EPA-HQ-2012-0268**. You can then use EPA's electronic docket and comment system at www.regulations.gov to submit or view public comments, to access the index listing of the contents of the docket, and to access those documents in the docket that are available electronically. For further information about the docket and commenting, please consult the ADDRESSES section in the front of the *Federal Register* document, or visit <http://www.epa.gov/dockets/index.htm>.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 721

[EPA-HQ-OPPT-2012-0268; FRL-9358-7]

RIN 2070-AJ95

Perfluoroalkyl Sulfonates and Long-Chain Perfluoroalkyl Carboxylate Chemical Substances; Proposed Significant New Use Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Under the Toxic Substances Control Act (TSCA), EPA is proposing to amend a significant new use rule (SNUR) for perfluoroalkyl sulfonate (PFAS) chemical substances to add PFAS chemical substances that have completed the TSCA new chemical review process but have not yet commenced production or import, and to designate (for all listed PFAS chemical substances) processing as a significant new use. EPA is also proposing a SNUR for long-chain perfluoroalkyl carboxylate (LCPFAC) chemical substances that would designate manufacturing, importing, or processing for use as part of carpets or for treating carpet (e.g., for use in the carpet aftercare market) as a significant new use. For this SNUR, EPA is also proposing to make the article exemption inapplicable to the import of LCPFAC chemical substances as part of carpets. Persons subject to these SNURs would be required to notify EPA at least 90 days before commencing any significant new use. The required notifications would provide EPA with the opportunity to evaluate the intended use and, if necessary, to prohibit or limit that activity before it occurs.

DATES: Comments must be received on or before [*insert date [60] days after date of publication in the Federal Register*].

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPPT-2012-0268, by one of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the on-line instructions for submitting comments.
- *Mail:* Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001.
- *Hand Delivery:* OPPT Document Control Office (DCO), EPA East Bldg., Rm. 6428, 1201 Constitution Ave., NW., Washington, DC. Attention: Docket ID number EPA-HQ-OPPT-2012-0268. The DCO is open from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The telephone number for the DCO is (202) 564-8930. Such deliveries are only accepted during the DCO's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to docket ID number EPA-HQ-OPPT-2012-0268. EPA's policy is that all comments received will be included in the docket without change and may be made available on-line at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [regulations.gov](http://www.regulations.gov) or e-mail. The [regulations.gov](http://www.regulations.gov) website is an “anonymous access” system, which means EPA will not know your identity or contact

information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket, visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

Docket: All documents in the docket are listed in the docket index available in regulations.gov. To access the electronic docket, go to <http://www.regulations.gov>; select "Advanced Search," then "Docket Search." Insert the docket ID number where indicated and select the "Submit" button. Follow the instructions on the regulations.gov web site to view the docket index or access available documents. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically at <http://www.regulations.gov>, or, if only available in hard copy, at the OPPT Docket. The OPPT Docket is located in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave., NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to

4:30 p.m., Monday through Friday, excluding Federal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566-1744, and the telephone number for the OPPT Docket is (202) 566-0280. Docket visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor bags are processed through an X-ray machine and subject to search. Visitors will be provided an EPA/DC badge that must be visible at all times in the building and returned upon departure.

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* Katherine Sleasman, Chemical Control Division (7405M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: 202-564-7716; e-mail address: *sleasman.katherine@epa.gov*.

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554-1404; e-mail address: *TSCA-Hotline@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be potentially affected by this action if you manufacture, process, or import any of the chemical substances listed in Table 4 of this unit.

Potentially affected entities may include, but are not limited to:

- Manufacturers or importers of one or more of subject chemical substances (North American Industrial Classification System (NAICS) codes 325 and 324110); e.g., chemical manufacturing and petroleum refineries,
- carpet and rug mills (NAICS code 314110),
- fiber, yarn, and thread mills (NAICS code 31311),
- home furnishing merchant wholesalers (NAICS code 423220), and
- carpet and upholstery cleaning services (NAICS code 561740).

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in this unit could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether this action might apply to certain entities. To determine whether you or your business may be affected by this action, you should carefully examine the applicability provisions in 40 CFR 721.5, 40 CFR 721.9582, and proposed 40 CFR 721.10536. If you have any questions regarding the applicability of this action to a particular entity, consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

This action may also affect certain entities through pre-existing import certification and export notification rules under TSCA. Persons who import any chemical substance governed by a final SNUR are subject to the TSCA section 13 (15 U.S.C. 2612) import certification requirements and the corresponding regulations at 19 CFR 12.118 through 12.127; see also 19 CFR 127.28. Those persons must certify that the shipment of the chemical substance complies with all applicable rules and orders under TSCA, including any SNUR requirements. The EPA policy in support of import certification appears at 40

CFR part 707, subpart B. In addition, any persons who export or intend to export a chemical substance that is the subject of this proposed rule on or after **[insert date 30 days after the date of publication in the FR]** are subject to the export notification provisions of TSCA section 12(b) (15 U.S.C. 2611(b)), (see 40 CFR 721.20), and must comply with the export notification requirements in 40 CFR part 707, subpart D.

B. What Should I Consider as I Prepare My Comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM that you mail to EPA as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When submitting comments, remember to:

- i. Identify the document by docket ID number and other identifying information (subject heading, **Federal Register** date, and page number).
- ii. Follow directions. The Agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- iii. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

- iv. Describe any assumptions and provide any technical information and/or data that you used.
- v. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- vi. Provide specific examples to illustrate your concerns and suggest alternatives.
- vii. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- viii. Make sure to submit your comments by the comment period deadline identified.

II. Background

A. What Action Is the Agency Taking?

Under section 5(a)(2) of TSCA, EPA is proposing to amend a SNUR at § 721.9582 for PFAS chemical substances to add PFAS chemical substances that have completed the TSCA new chemical review process but have not yet commenced production or import, and to designate (for all listed PFAS chemical substances) processing as a significant new use. EPA is also proposing a SNUR for LCPFAC chemical substances that would designate manufacturing, importing, or processing for use as part of carpets or for treating carpet (e.g., for use in the carpet aftercare market) as a significant new use. For this SNUR, EPA is also proposing to make the article exemption at §721.45(f) inapplicable to persons who import LCPFAC chemical substances as part of carpets because if in the future LCPFAC are incorporated in carpets and then imported, exposure would increase. However, the article exemption at §721.45(f) would be in effect for persons who import LCPFAC chemical substances as part of other sorts of articles. The article exemption at §721.45(f) relating to persons who

process chemical substances as part of an article would also be in effect, for both the PFAS SNUR and the LCPFAC SNUR. On December 30, 2009, EPA issued the “Long-Chain Perfluorinated Chemicals (PFCs) Action Plan” (Ref. 1). Today’s action is consistent with the purpose of that Action Plan. EPA is continuing to assess these chemicals to determine what other actions would be warranted.

In this proposal, the term PFAS refers to a general category of perfluorinated sulfonate chemical substances of any chain length. The PFAS chemical substances for which EPA is proposing to modify an existing SNUR are currently listed in §721.9582 in paragraph (a)(1). The PFAS chemical substances that EPA is proposing to add to an existing SNUR would be added to this list. All of these chemical substances are collectively referred to in this proposed rule as perfluoroalkyl sulfonates, or PFAS chemical substances.

The term LCPFAC refers to the long-chain category of perfluorinated carboxylate chemical substances with perfluorinated carbon chain lengths equal to or greater than seven carbons. The category of LCPFAC chemical substances also includes the salts and precursors of these perfluorinated carboxylates. See Unit IV.A for the specific definition of the LCPFAC category.

B. What Is the Agency's Authority for Taking this Action?

Section 5(a)(2) of TSCA (15 U.S.C. 2604(a)(2)) authorizes EPA to determine that a use of a chemical substance is a "significant new use." EPA must make this determination by rule after considering all relevant factors, including those listed in TSCA section 5(a)(2). Once EPA determines that a use of a chemical substance is a significant new use, TSCA section 5(a)(1)(B) requires persons to submit a significant

new use notice (SNUN) to EPA at least 90 days before they manufacture, import, or process the chemical substance for that use (15 U.S.C. 2604(a)(1)(B)). As described in Unit II.C., the general SNUR provisions are found at 40 CFR Part 721, Subpart A.

C. Applicability of General Provisions

General provisions for SNURs appear under 40 CFR part 721, subpart A. These provisions describe persons subject to the rule, recordkeeping requirements, exemptions to reporting requirements, and applicability of the rule to uses occurring before the effective date of the final rule. However, EPA is proposing that the articles exemption at 40 CFR 721.45(f) would not apply to imports of LCPFAC chemical substances as part of carpets under this proposed SNUR. As a result, persons subject to the provisions of this proposed rule would not be exempt from significant new use reporting if they import LCPFAC chemical substances as part of carpets. However, EPA is proposing that the articles exemption remain in effect for persons who process chemical substances as part of an article because, with respect to carpets, existing stocks may still contain LCPFAC substances. Provisions relating to user fees appear at 40 CFR part 700. According to 40 CFR 721.1(c), persons subject to SNURs must comply with the same notice requirements and EPA regulatory procedures as submitters of Premanufacture Notices (PMNs) under TSCA section 5(a)(1)(A). In particular, these requirements include the information submissions requirements of TSCA section 5(b) and 5(d)(1), the exemptions authorized by TSCA section 5(h)(1), (h)(2), (h)(3), and (h)(5), and the regulations at 40 CFR part 720. Once EPA receives a SNUN, EPA may take regulatory action under TSCA section 5(e), 5(f), 6 or 7 to control the activities on which it has received the SNUN. If EPA does

not take action, EPA is required under TSCA section 5(g) to explain in the **Federal Register** its reasons for not taking action.

Persons who export or intend to export a chemical substance identified in a proposed or final SNUR are subject to the export notification provisions of TSCA section 12(b). The regulations that interpret TSCA section 12(b) appear at 40 CFR part 707, subpart D. Persons who import a chemical substance identified in a final SNUR are subject to the TSCA section 13 import certification requirements, codified at 19 CFR 12.118 through 12.127; see also 19 CFR 127.28. Such persons must certify that the shipment of the chemical substance complies with all applicable rules and orders under TSCA, including any SNUR requirements. The EPA policy in support of import certification appears at 40 CFR part 707, subpart B.

III. Overview of PFAS Chemical Substances

A. What PFAS Chemical Substances Are Subject to this Proposed SNUR?

The PFAS chemical substances for which EPA is proposing to add additional significant new uses are already listed in §721.9582 in paragraph (a)(1). The PFAS chemical substances that EPA is proposing to add to the existing PFAS SNUR are the subjects of PMN Case Numbers P-83-0126, P-90-0110, P-94-1508, P-94-1509B, P-98-0809, P-99-0296, and P-01-0035. The PMN submitters for these chemicals never commenced manufacturing or import of these chemicals. EPA considers that the commencement of manufacturing, import, or processing of these chemicals would thus significantly increase the magnitude and duration of exposure to humans and the environment. Given the structural similarity of these chemicals to the PFAS chemicals covered under 40 CFR 721.9582 and EPA's health and environmental concerns

associated with these chemicals, EPA has concluded any manufacturing, import, or processing for any use of these uncommenced PFAS chemicals would be a significant new use and therefore, action on these PFAS chemicals is warranted.

All of these chemical substances are referred collectively in this proposed rule as perfluoroalkyl sulfonates, or PFAS chemical substances.

B. What Action Has the Agency Previously Taken on Other PFAS Chemical Substances?

On October 18, 2000, EPA published in the Federal Register a proposed SNUR (65 FR 62319) (FRL-6745-5) to regulate perfluorooctyl sulfonate (PFOS). The structure and definition of the chemical substances affected by the proposed SNUR were described on page 62325, Unit IV.A. of that proposed rule. The final rule was published in the Federal Register on March 11, 2002 (67 FR 11008) (FRL-6823-6), for 13 PFAS chemical substances (Ref. 2). In response to comments, EPA decided to use the generic term perfluoroalkyl sulfonates (PFAS) for this category of perfluorinated compounds, which includes those with eight carbons as well as those with higher and lower amounts of carbon and the term PFOS to represent only those chemical substances that have predominantly eight carbons. A supplemental proposed SNUR for 75 other similar PFAS chemical substances was published in the Federal Register on March 11, 2002 (67 FR 11014) (FRL-6823-7) (Ref. 3). EPA promulgated a final rule for these 75 PFAS chemical substances on December 9, 2002 (67 FR 72854) (FRL-7279-1) (Ref. 4). On March 10, 2006 (71 FR 12311) (FRL-7740-6), EPA proposed to add 183 PFAS chemical substances to the SNUR at 40 CFR 721.9582, and published a final rule for these 183 PFAS chemical substances on October 9, 2007 (71 FR 12311) (FRL-8150-4) (Ref. 5).

C. What Are the Uses and Production Levels of the PFAS Chemical Substances?

The Agency previously determined that the 271 PFAS chemical substances identified in 40 CFR 721.9582(a)(1) were no longer being manufactured or imported for any use in the United States, other than the uses listed under §721.9582 (a)(3), (a)(4), and (a)(5) (67 FR 72858 and 72 FR 57225). In addition, since those chemicals are no longer manufactured or imported other than for the listed uses, EPA concluded that those chemical substances are also no longer processed other than for those listed uses.

PFAS chemical substances included in §721.9582 were previously used in a variety of products, which can be divided into three main use categories: surface treatments, paper protection, and performance chemicals (Ref. 6). In the past, PFAS chemical substances in the performance chemicals category were used in a wide variety of specialized industrial, commercial, and consumer applications. Specific applications included fire fighting foams, mining and oil well surfactants, acid mist suppressants for metal plating and electronic etching baths, alkaline cleaners, floor polishes, inks, photographic film, denture cleaners, shampoos, chemical intermediates, coating additives, carpet spot cleaners, and as an insecticide in bait stations for ants (Ref. 7). In 2000, the domestic production volume of the PFAS chemical substances containing eight carbons for the performance chemicals use category was estimated to be approximately 1.5 million pounds (Ref. 16).

PFAS chemical substances were also used for treating textiles, fabrics and carpet. These upholstery and fabric protectors were designed to protect rugs and carpets against soiling and restore their original look. Prior to 2003, these formulations were based on PFOS compounds, which contain eight perfluorinated carbons. After 2003, however, 3M, the primary manufacturer of these chemical substances, reformulated the product to be

based on perfluorobutane sulfonate (PFBS) compounds containing four perfluorinated carbons (Ref. 8). In addition to domestic manufacture, articles treated with these PFAS chemical substances are also imported. EPA is continuing to evaluate these uses and may determine that regulatory action may be appropriate in the future.

The PFAS chemical substances that EPA is proposing to add to the existing PFAS SNUR are chemical substances that have completed the TSCA new chemical review process but have not yet commenced production or import. Any person who commences the manufacture or import of a new chemical substance for which that person previously submitted a section 5(a) notice must submit a notice of commencement of manufacture or import (40 CFR 720.102). EPA has not received any notices of commencements for these chemical substances, and there is currently no production or import of these chemical substances. If commenced, these chemical substances could be used for the PFAS uses described above, significantly increasing the magnitude and duration of exposure to humans and the environment, constituting a significant new use.

D. What Are the Potential Health Effects of these Chemicals and the Potential Sources and Routes of Exposures to these Chemicals?

PFAS chemical substances degrade ultimately to perfluoroalkylsulfonic acid (PFASA), which can exist in the anionic form under environmental conditions. Further degradation of PFASA is not observed under normal environmental conditions. PFASA is highly persistent in the environment and has a tendency to bioaccumulate (Refs. 8 and 9). PFASA can continue to be formed by any PFAS containing chemical substances introduced into the environment.

Studies have found PFAS chemical substances containing five to fourteen carbons (C5-C14) in the blood of the general human population, as well as in wildlife, indicating that exposure to these chemical substances is widespread (Refs. 1, 2, and 10). The widespread presence of PFAS chemical substances in human blood samples nationwide suggests other pathways of exposure, possibly including the release of PFAS treated articles. EPA's Office of Research and Development (ORD) has conducted research on 116 articles of commerce documenting that PFCs contained in articles of commerce have the potential to be released from those articles and be transformed into PFAC (Ref. 1).

Biological sampling has shown the presence of certain perfluoroalkyl compounds in fish and in fish-eating birds across the United States and in locations in Canada, Sweden, and the South Pacific (Ref. 2). The wide distribution of the chemical substances in high trophic levels is strongly suggestive of the potential for bioaccumulation and/or bioconcentration.

Based on currently available information, EPA believes that while all PFAS chemical substances are expected to persist, the length of the perfluorinated chain may also have an effect on bioaccumulation and toxicity, which are also characteristics of concern for these chemical substances. PFAS chemical substances with longer carbon chain lengths may be of greater concern than those with shorter chain lengths (Refs. 11, 12, and 13).

The hazard assessment published by the Organization for Economic Cooperation and Development (OECD) (Ref. 15) concluded that perfluorooctyl sulfonates (PFOS) are persistent, bioaccumulative and toxic to mammalian species. While most studies to date have focused primarily on PFOS, structure-activity relationship analysis indicates that the

results of those studies are applicable to the entire category of PFAS chemical substances, which includes PFOS. Available test data have raised concerns about their potential developmental, reproductive, and systemic toxicity (Refs. 1, 2, and 3).

For a more detailed summary of background information (*e.g.*, chemistry, environmental fate, exposure pathways, and health and environmental effects), as well as references pertaining to PFAS chemical substances, please refer to EPA's proposed SNURs on PFAS chemical substances issued in the Federal Register of October 18, 2000 (65 FR 62319) (FRL-6745-5) (Ref. 16) and March 10, 2006 (71 FR 12311) (FRL-7740-6) (Ref. 17), and also refer to December 30, 2009 Long-Chain Perfluorinated Chemicals Action Plan (Ref. 1).

IV. Overview of LCPFAC Chemical Substances

A. What LCPFAC Chemical Substances Are Subject to this Proposed SNUR?

LCPFAC chemical substances are synthetic chemicals that do not occur naturally in the environment. The LCPFAC chemical substances are identified as follows, where $n > 5$ or $m > 6$:

- i. $\text{CF}_3(\text{CF}_2)_n\text{-COO}^-\text{M}$ where $\text{M} = \text{H}^+$ or any other group where a formal dissociation can be made;
- ii. $\text{CF}_3(\text{CF}_2)_n\text{-CH=CH}_2$;
- iii. $\text{CF}_3(\text{CF}_2)_n\text{-C(=O)-X}$ where X is any chemical moiety;
- iv. $\text{CF}_3(\text{CF}_2)_m\text{-CH}_2\text{-X}$ where X is any chemical moiety;
- v. $\text{CF}_3(\text{CF}_2)_m\text{-Y-X}$ where Y = non-S, non-N hetero atom and where X is any chemical moiety; and

vi. structurally similar degradation products of any of the compounds in ii. through v. above.

This category definition of LCPFAC, based on the chemical structures above, refers to a large group of chemical substances containing perfluorooctanoic acid (PFOA) and its higher homologues. The category also includes the salts and precursors of these chemical substances. The precursors may be simple derivatives of PFOA and higher homologues or polymers that contain or may degrade to PFOA or higher homologues. These precursors include certain fluoropolymers and all fluorotelomers.

B. What Are the Uses and Production Levels of LCPFAC Chemical Substances?

Currently, DuPont is the sole manufacturer of PFOA in the United States. In addition, PFOA, except possibly as part of articles, is not imported into the United States with the exception of the product manufactured by DuPont facilities overseas. According to EPA's 2006 Inventory Update Reporting database, the aggregated production volume of PFOA and ammonium perfluorooctanoate (APFO) was less than 500,000 pounds for each. APFO is the ammonium salt of PFOA, which dissociates to PFOA in water (Ref. 1).

Fluoropolymers such as polytetrafluoroethylene (PTFE), which may contain some PFAC contamination, or that use PFOA as an emulsion stabilizer in aqueous dispersions, are included in the LCPFAC definition and have a large U.S. market. The wire and cable industry is one of the largest segments of the fluoropolymer market, accounting for more than 35 percent of total U.S. fluoropolymer use. Apparel makes up about 10 percent of total fluoropolymer use, based on total reported production volume. Fluoropolymers are used in a wide variety of mechanical and industrial components, such as plastic gears,

gaskets and sealants, pipes and tubing, O-rings, and many other products. Total U.S. demand for fluoropolymers in 2004 was between 50,000 and 100,000 metric tons. The United States accounted for less than 25 percent of the world consumption of PTFE in 2007, and between 25 and 50 percent of the world consumption of other fluoropolymers. PTFE is the most commonly used fluoropolymer, and the United States consumed less than 50,000 metric tons of PTFE in 2008 (Ref. 1).

Fluorotelomers, oligomers of tetrafluoroethylene, are relatively small functionalized molecules used to make polymers. World-wide production of fluorotelomer-based polymers (FTBP), was estimated at 20 million pounds in 2006. Fluorotelomer monomers and FTBP are included in the LCPFAC category definition as potential LCPFAC precursors. The United States accounts for more than 50 percent of world-wide fluorotelomer/FTPB production. Textiles and apparel account for approximately 50 percent of the volume, with carpet and carpet care products accounting for the next largest share in consumer product uses. Polymeric coatings, including those for paper products, are the third largest category of consumer product uses (Ref. 1). Articles tested and found to contain the highest levels of PFAC were carpet and carpet treatment products, various types of apparel, home textiles, thread sealant tape, floor wax and other sealants, and food contact paper and paper coatings.

LCPFAC chemical substances, including FTBP, were used in the textile market because of their thermo-stability, ability to adapt to a variety of surface characteristics, low refractive indexes, low dielectric constants, and high chemical stability. FTBP are used as soil retardants and stain repellents in carpets. FTBP are used to treat textiles which cannot be laundered, including carpets, by preventing or reducing the adhesion of

liquid or solid contaminants to the textile fibers. Fluorotelomer carpet treatments are incorporated in polymers including fluorinated polyurethanes, fluorinated vinyl polymers and fluorinated acrylate and methacrylate polymers. Most of these fluorinated polymers have a non-fluorinated backbone with fluorinated alkyl chains which provide the desired physical characteristics. Fluorinated polyurethanes are noted to be tough but resilient and can withstand foot traffic on carpets (Ref. 19).

PFAS and LCPFAC chemical substances were used in carpets to impart stain, soil, and grease repellent properties (Ref. 18). There are four typical scenarios for chemical application that could lead to the presence of these chemical substances in carpet products, and this SNUR would apply to all of them. First, these chemical substances could be applied to carpet at a carpet and rug mill during the manufacturing process. Second, these chemical substances could be applied to carpet after the manufacturing process at a separate finishing facility. Third, treatment products containing these chemical substances could be applied to carpets in the aftermarket by consumers or professional carpet cleaners. In the described scenarios, LCPFAC chemical substances could have been domestically produced or imported. Fourth, treated carpet fabrics or treated carpet could be imported as articles. Domestically produced carpets could be made using imported fabrics that had been treated with PFAS or LCPFAC chemical substances or carpet containing these chemical substances could be imported into the United States as a final product.

The Agency believes that the LCPFAC chemical substances included in this proposal are no longer being manufactured, processed, or imported for use as part of carpet or for treating carpet (e.g., for use in the carpet aftercare market) in the United

States. The Agency also believes that LCPFAC chemical substances are not being imported as part of carpet. In January 2012, The Carpet and Rug Institute (CRI) informed EPA that all members of CRI have voluntarily discontinued the use of LCPFAC chemical substances and have switched to alternative compounds beginning prior to 2003 and completing sometime near the end of 2005 or beginning of 2006 (Ref. 19). CRI is a nonprofit trade association representing the manufacturers of more than 95 percent of all carpet made in the United States, as well as their suppliers and service providers.

Although CRI does not track data from non-United States manufacturers or the few domestic manufacturers who are not members of CRI, EPA's market analysis showed no indication that imported carpet products contain PFAS and LCPFAC chemical substances covered by this proposal, nor did it show any evidence that these chemical substances are manufactured or imported for use as part of carpets (Refs. 20 and 21). The Agency is concerned that LCPFAC chemicals may in the future be used again as part of carpet or for treating carpet, and is hence proposing to include these uses among the significant new uses to be designated for those chemical substances.

D. What Are the Potential Health and Environmental Effects of LCPFAC Chemical Substances and the Potential Sources and Routes of Exposure to These Substances?

The following summary of chemistry, environmental fate, exposure pathways, and health and environmental effects of LCPFAC chemical substances is based on the December 30, 2009 Long-Chain Perfluorinated Chemicals Action Plan (Ref. 1), as well as references cited in the 2009 Action Plan.

PFOA is the most studied chemical of the LCPFAC chemical substances. PFOA is manufactured for use primarily as an aqueous dispersion agent, as the ammonium salt,

in the manufacture of fluoropolymers, such as PTFE, which have thousands of important manufacturing and industrial applications. PFOA can also be produced unintentionally by the degradation of some fluorotelomers, which are not manufactured using PFOA but could degrade to PFOA. Fluorotelomers are used to make polymers that impart soil, stain, grease, and water resistance to coated articles. Some fluorotelomer based products are also used as high performance surfactants in products where an even flow is essential, such as paints, coatings, cleaning products, and fire-fighting foams for use on liquid fuel fires.

FTBP can be applied to articles both at the factory and by consumers and commercial applicators in after-market uses such as carpet treatments and water repellent sprays for apparel and footwear (Ref. 18). Therefore, exposure to carpet treatment chemicals may occur both during and after the carpet manufacturing process. In 2008, EPA's ORD conducted research on 116 articles of commerce and found high levels of LCPFAC in carpet and carpet treatment products (levels were from 0.04-40,200 nanograms per gram) (Ref. 1). This is of particular concern for children since they engage in a variety of activities on carpets for longer periods of time in their earliest years and can be exposed to chemical substances in carpets via inhalation and dust ingestion (Ref. 1).

PFOA and its higher homologues are highly persistent chemical substances that are resistant to degradation under environmental conditions. The chemical substances which degrade to form these chemicals are called LCPFAC precursors. These precursors may be present in the final polymer product as residuals and the amount present in the polymer as perfluoroalkyl group (R_f) moieties. The availability of LCPFAC precursor

from the content of residuals in fluorotelomer based polymer products (FTBP) would be small in comparison to the amount released should polymeric materials biodegrade in the environment. Potentially all monomeric and most if not all polymeric products, not just the small amounts of residual monomers and other monomer raw material and intermediates, could be LCPFAC precursors. LCPFAC can continue to be formed by LCPFAC precursors introduced into the environment as they biodegrade with time.

A limited number of studies on the degradation of fluorotelomers have been submitted in support of PMN submissions and existing chemical substances, and they have been published in the open literature. Based on studies, some fluorotelomer-based polymers are subject to hydrolysis, photolysis and biodegradation to some extent. Studies have shown half-lives of a few days to hundreds of years. In addition, existing research on degradation of fluorotelomers has shown that some urethanes and acrylates biodegrade; however, half-lives and kinetics of the fluorotelomers are not yet well defined (Ref. 22). Nevertheless, these studies have shown unambiguously that the perfluorinated portion of some polymers is released as the polymer is degraded by microbial or abiotic processes to form telomer alcohols or other intermediates and that they eventually form LCPFAC.

LCPFAC have been detected in biota, air, water, dust, and soil samples collected throughout the world. Some LCPFAC chemical substances have the potential for long-range transport. They are transported over long distances by a combination of dissolved-phase ocean and gas-phase atmospheric transport; however, determining which is the predominant transport pathway is complicated by many factors including the uncertainty over water to atmosphere partitioning. Furthermore, there is evidence that transport and

subsequent oxidation of volatile alcohol LCPFAC precursors contribute to the levels of LCPFAC in the environment.

LCPFAC chemical substances have been detected in human blood samples throughout the United States and the world. These compounds have also been detected in human breast milk, liver, umbilical cord blood, and seminal plasma. Individual samples collected on perfluorinated chemical substances in the most recent National Health and Nutrition Examination Survey (NHANES) 1999-2009 are similar across teens and adults (Ref. 1); however, pooled data from NHANES 2001-2002 indicate that most of the levels of perfluorinated compounds are higher in children ages 3-11 years compared to adults. In addition, a 2009 Texas survey of 300 children reported PFOS, PFOA, perfluorohexanesulfonate (PFHS) and perfluorononanoic acid (PFNA) at higher levels in children 9 to 13 years than in 0 to 2 years (Ref. 1).

Multiple studies have reported a global distribution of LCPFAC in wildlife tissue and blood samples. LCPFAC have also been found in a variety of aquatic organisms. In general, the highest concentrations in wildlife have been found in the livers of fish-eating animals close to industrialized areas.

Animal studies of the straight-chain LCPFAC have shown that these compounds are well absorbed orally, but poorly eliminated; they are not metabolized, and they undergo extensive uptake from enterohepatic circulation. Studies of PFOA have shown that these compounds are distributed mainly to the serum, kidney, and liver, with liver concentrations being several times higher than serum concentrations; the distribution is mainly extracellular. PFOA has a high affinity for binding to B-lipoproteins, albumin, and liver fatty acid-binding protein. Studies have reported several LCPFAC chemical

substances in umbilical cord blood, in amniotic fluid, and in blood samples from infants and toddlers (Ref. 1).

In general, the rate of elimination decreases with increasing chain length. Elimination in humans takes years (elimination half-life of PFOA is 2.3-3.8 years). These compounds will persist and bioaccumulate in humans, which means that comparatively low exposures may result in large body burdens.

LCPFAC bioaccumulate and persist in protein-rich compartments of fish, birds, and marine mammals, such as carcass, blood, and liver. Studies have found fish bioconcentration factor (BCF) values for C8 to C14 LCPFAC ranging from 4 – 40,000 in rainbow trout. Available evidence shows the likely potential for bioaccumulation or biomagnifications in marine or terrestrial species. Additional evidence that C14 and C15 LCPFAC bioaccumulate and are bioavailable is their presence in fish, invertebrates, and polar bears. The bioaccumulation of LCPFAC is thought to represent biomagnification due to high gastrointestinal uptake and slow elimination.

The toxicity of PFOA has been extensively studied and available data have raised concerns about LCPFAC chemical substances' potential developmental, reproductive, and systemic toxicity (Ref. 1). Although there is an extensive database for PFOA, few studies have examined the toxicity of other LCPFAC chemical substances. However, the data suggest that the toxicity profile is quite similar to that of PFOA, albeit at different dose levels.

V. Rationale and Objectives

A. Rationale

As discussed in Units III and IV., PFAS and LCPFAC chemical substances are found world-wide in the environment, wildlife, and humans. They are bioaccumulative in wildlife and humans, and are persistent in the environment. They are toxic to laboratory animals, producing reproductive, developmental, and systemic effects in laboratory tests. The exact sources and pathways by which these chemicals move into and through the environment and allow humans and wildlife to become exposed are not fully understood, but are likely to include releases from manufacturing of the chemicals, processing of these chemicals into products like carpets and textiles, and aging and wear of products containing them.

Since the manufacture, import, and processing of PFAS and LCPFAC chemical substances for the proposed uses have been discontinued, EPA expects their presence in humans and the environment to decline over time as has been observed in the past when production and use of other persistent chemicals has ceased. EPA is concerned that the manufacturing, import (including import as part of certain articles), or processing of these chemical substances for the proposed new uses could be reinitiated in the future. If reinitiated, EPA believes that such use would increase the magnitude and duration of exposure to humans and the environment to these chemical substances, constituting a significant new use.

EPA is concerned about the potential for PFAS or LCPFAC chemical substances (manufactured or imported for an ongoing use) to be redirected to other uses without prior notice to the Agency. For example, a chemical substance may be initially manufactured or imported for a uses listed under §721.9582 (a)(3), (a)(4), or (a)(5), and then redirected for another use after its initial manufacture or import. EPA is therefore

proposing to add the processing of a PFAS chemical substances (for any use in the United States, other than the uses listed under §721.9582 (a)(3), (a)(4), and (a)(5)) to the significant new uses of those chemical substances. For similar reasons, EPA is proposing to include the processing of LCPFAC chemical substances (for use as part of carpets or to treat carpet) among the significant new uses to be designated for those chemical substances. While the processing of articles containing PFAS and LCPFAC would remain exempt from notice requirements, pursuant to § 721.45(f), persons who otherwise process PFAS or LCPFAC for a use other than the above-listed uses where applicable would be required to first notify EPA, even if they are not themselves manufacturers or importers of the chemical substance.

Accordingly, EPA wants the opportunity to evaluate and control, where appropriate, activities associated with those uses, if such manufacturing, importing, or processing were to start or resume. The required notification provided by a SNUN would provide EPA with the opportunity to evaluate activities associated with a significant new use and an opportunity to protect against unreasonable risks, if any, from exposure to PFAS and LCPFAC chemical substances.

Consistent with EPA's past practice for issuing SNURs under TSCA section 5(a)(2), EPA's decision to propose a SNUR for a particular chemical use need not be based on an extensive evaluation of the hazard, exposure, or potential risk associated with that use. Rather, the Agency's action is based on EPA's determination that if the use begins or resumes, it may present a risk that EPA should evaluate under TSCA before the manufacturing or processing for that use begins. Since the new use does not currently exist, deferring a detailed consideration of potential risks or hazards related to that use is

an effective use of resources. If a person decides to begin manufacturing or processing the chemical for the use, the notice to EPA allows EPA to evaluate the use according to the specific parameters and circumstances surrounding that intended use.

While the Agency is currently only proposing as significant new uses of LCPFAC chemical substances use as part of carpet or to treat carpet, the Agency believes the 2010/2015 PFOA Stewardship Program will eliminate many other ongoing uses of LCPFAC chemical substances. As those uses are phased out in the United States, EPA anticipates taking additional regulatory actions to prevent resumption of the uses without prior notice to EPA.

B. Objectives

Based on the considerations in Unit V.A., EPA wants to achieve the following objectives with regard to the significant new use(s) that are designated in this proposed rule:

1. EPA would receive notice of any person's intent to manufacture, import, or process PFAS or LCPFAC chemicals for the described significant new use before that activity begins.
2. EPA would have an opportunity to review and evaluate data submitted in a SNUN before the notice submitter begins manufacturing, importing, or processing PFAS or LCPFAC chemicals for the described significant new use.
3. EPA would be able to regulate prospective manufacturers, importers, or processors of PFAS or LCPFAC chemicals before the described significant new use of the chemical substance occurs, provided that regulation is warranted pursuant to TSCA sections 5(e), 5(f), 6 or 7.

VI. Significant New Use Determination

Section 5(a)(2) of TSCA states that EPA's determination that a use of a chemical substance is a significant new use must be made after consideration of all relevant factors including:

- The projected volume of manufacturing and processing of a chemical substance.
- The extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance.
- The extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance.
- The reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance.

In addition to these factors enumerated in TSCA section 5(a)(2), the statute authorizes EPA to consider any other relevant factors.

To determine what would constitute a significant new use of the PFAS and LCPFAC chemical substances subject to this proposed rule, as discussed herein, EPA considered relevant information about the toxicity of these substances, likely human exposures and environmental releases associated with possible uses, and the four factors listed in section 5(a)(2) of TSCA.

EPA has preliminarily determined that the manufacture, import, processing of any of the PFAS chemical substances subject to this proposed rule, for any use except ongoing uses specified in § 721.9582(a)(3) through (a)(5) of the regulatory text in this document, is a significant new use. EPA has also preliminarily determined that the

manufacture, import, or processing of any of the LCPFAC chemical substances subject to this proposed rule for use as part of carpet or to treat carpets, is a significant new use, and further determined that importing any of the LCPFAC chemical substances subject to this proposed rule as part of carpet constitutes a significant new use and warrants making inapplicable the article exemption at §721.45(f).

VII. Request for Comment

EPA welcomes comments on any aspect of this proposed SNUR. EPA requests comment on whether any of the uses proposed to be added as significant new uses are in fact ongoing, and would request specific documentation of any such ongoing use.

VIII. Alternatives

Before proposing this SNUR, EPA considered the following alternative regulatory actions:

A. Promulgate a TSCA Section 8(a) Reporting Rule

Under a TSCA section 8(a) rule, EPA could, among other things, generally require persons to report information to the Agency when they intend to manufacture, import, or process a listed chemical for a specific use or any use. However, for PFAS and LCPFAC chemical substances, the use of TSCA section 8(a) rather than SNUR authority would have several limitations. First, if EPA was to require reporting under TSCA section 8(a) instead of TSCA section 5(a), EPA would not have the opportunity to review human and environmental hazards and exposures associated with the proposed significant new use and, if necessary, take immediate follow-up regulatory action under TSCA sections 5(e) or 5(f) to prohibit or limit the activity before it begins. In addition, EPA may not receive important information from small businesses, because such firms generally are exempt

from TSCA section 8(a) reporting requirements. In view of the level of health and environmental concerns about PFAS and LCPFAC chemical substances if used for the proposed significant new use, EPA believes that a TSCA section 8(a) rule for this substance would not meet EPA's regulatory objectives.

B. Regulate PFAS and LCPFAC Chemical Substances under TSCA Section 6

EPA may regulate under TSCA section 6 if "the Administrator finds that there is a reasonable basis to conclude that the manufacture, processing, distribution in commerce, use or disposal of a chemical substance or mixture . . . presents or will present an unreasonable risk of injury to health or the environment." (TSCA section 6(a)). Given that LCPFAC chemical substances are no longer being used as part of a carpet, and that the PFAS chemicals subject to this action have not commenced production or import, EPA concluded that risk management action under TSCA section 6 for these uses is not necessary at this time. This proposed SNUR would allow the Agency to address the potential risks associated with the proposed significant new use.

IX. Applicability of Rule to Uses Occurring before Effective Date of the Final Rule

As discussed in the Federal Register of April 24, 1990 (55 FR 17376), EPA has decided that the intent of section 5(a)(1)(B) of TSCA is best served by designating a use as a significant new use as of the date of publication of the proposed rule rather than as of the effective date of the final rule. If uses begun after publication of the proposed rule were considered ongoing rather than new, it would be difficult for EPA to establish SNUR notice requirements, because a person could defeat the SNUR by initiating the proposed significant new use before the rule became final, and then argue that the use was ongoing as of the effective date of the final rule. Thus, persons who begin

commercial manufacture, import, or processing of the chemical substance(s) that would be regulated through this proposed rule, if finalized, would have to cease any such activity before the effective date of the rule if and when finalized. To resume their activities, these persons would have to comply with all applicable SNUR notice requirements and wait until the notice review period, including all extensions, expires. Uses arising after the publication of the proposed rule are distinguished from uses that exist at publication of the proposed rule. The former would be new uses, the latter ongoing uses. To the extent that additional ongoing uses are found in the course of rulemaking, EPA would exclude those uses from the final SNUR. EPA has promulgated provisions to allow persons to comply with this SNUR before the effective date. If a person were to meet the conditions of advance compliance under section 721.45(h), that person would be considered to have met the requirements of the final SNUR for those activities.

X. Test Data and Other Information

EPA recognizes that TSCA section 5 does not usually require developing any particular test data before submission of a SNUN. There are two exceptions: 1) development of test data is required where the chemical substance subject to the SNUR is also subject to a test rule under TSCA section 4 (see TSCA section 5(b)(1)); and 2) development of test data may be necessary where the chemical substance has been listed under TSCA section 5(b)(4) (see TSCA section 5(b)(2)). In the absence of a section 4 test rule or a section 5(b)(4) listing covering the chemical substance, persons are required only to submit test data in their possession or control and to describe any other data known to or reasonably ascertainable by them (15 U.S.C. 2604(d); 40 CFR 721.25, and

40 CFR 720.50). However, as a general matter, EPA recommends that SNUN submitters include data that would permit a reasoned evaluation of risks posed by the chemical substance during its manufacture, import, processing, use, distribution in commerce, or disposal. EPA encourages persons to consult with the Agency before submitting a SNUN. As part of this optional pre-notice consultation, EPA would discuss specific data it believes may be useful in evaluating a significant new use. SNUNs submitted for significant new uses without any test data may increase the likelihood that EPA will take action under TSCA section 5(e) to prohibit or limit activities associated with this chemical.

SNUN submitters should be aware that EPA will be better able to evaluate SNUNs that provide detailed information on:

1. Human exposure and environmental releases that may result from the significant new uses of the chemical substance.
2. Potential benefits of the chemical substance.
3. Information on risks posed by the chemical substances compared to risks posed by potential substitutes.

XI. SNUN Submissions

EPA recommends that submitters consult with the Agency prior to submitting a SNUN to discuss what data may be useful in evaluating a significant new use.

Discussions with the Agency prior to submission can afford ample time to conduct any tests that might be helpful in evaluating risks posed by the substance. According to § 721.1(c), persons submitting a SNUN must comply with the same notice requirements and EPA regulatory procedures as persons submitting a PMN, including submission of

test data on health and environmental effects as described in § 720.50. SNUNs must be submitted on EPA Form No. 7710-25, generated using e-PMN software, and submitted to the Agency in accordance with the procedures set forth in §§721.25 and 720.40. E-PMN software is available electronically at <http://www.epa.gov/opptintr/newchems>.

XII. Economic Analysis

A. SNUNs

EPA has evaluated the potential costs of establishing SNUR reporting requirements for potential manufacturers, importers, and processors of the chemical substance included in this proposed rule (Ref. 23). In the event that a SNUN is submitted, costs are estimated at approximately \$8,571 per SNUN submission for large business submitters and \$6,171 for small business submitters. These estimates include the cost to prepare and submit the SNUN, and the payment of a user fee. Businesses that submit a SNUN would be subject to either a \$2,500 user fee required by 40 CFR 700.45(b)(2)(iii), or, if they are a small business with annual sales of less than \$40 million when combined with those of the parent company (if any), a reduced user fee of \$100 (40 CFR 700.45(b)(1)). The costs of submission of SNUNs will not be incurred by any company unless a company decides to pursue a significant new use as defined in this proposed SNUR. EPA's complete economic analysis is available in the public docket for this proposed rule (Ref. 23).

B. Export Notification

Under section 12(b) of TSCA and the implementing regulations at 40 CFR part 707, subpart D, exporters must notify EPA if they export or intend to export a chemical substance or mixture for which, among other things, a rule has been proposed or promulgated under section 5. For persons exporting a substance the subject of a SNUR, a

one-time notice must be provided for the first export or intended export to a particular country. The total costs of export notification will vary by chemical, depending on the number of required notifications (i.e., the number of countries to which the chemical is exported). EPA is unable to make any estimate of the likely number of export notifications for the chemical covered in this proposed SNUR.

XIII. References

As indicated under **ADDRESSES**, a docket has been established for this proposed rule under docket ID number EPA–HQ–OPPT–2012–0268. The following is a listing of the documents that have been placed in the docket for this proposed rule. The docket includes information considered by EPA in developing this proposed rule, including the documents listed in this unit, which are physically located in the docket. In addition, interested parties should consult documents that are referenced in the documents that EPA has placed in the docket, regardless of whether these referenced documents are physically located in the docket. For assistance in locating documents that are referenced in documents that EPA has placed in the docket, but that are not physically located in the docket, please consult either technical person listed under **FOR FURTHER INFORMATION CONTACT**. The docket is available for review as specified under **ADDRESSES**.

1. USEPA. "Long-Chain Perfluorinated Chemicals Action Plan." December 30, 2009.
2. USEPA. "Perfluoroalkyl Sulfonates; Significant New Use Rule, Final Rule." 67 FR 11008, March 11, 2002.

3. USEPA. "Perfluoroalkyl Sulfonates; Proposed Significant New Use Rule, Supplemental proposed rule." 67 FR 11014, March 11, 2002.
4. USEPA. "Perfluoroalkyl Sulfonates; Significant New Use Rule, Final Rule." 67 FR 72854, December 9, 2002.
5. USEPA. "Perfluoroalkyl Sulfonates; Proposed Significant New Use Rule, Final Rule." 72 FR 57222, October 9, 2007.
6. 3M Company. Fluorochemical Use, Distribution, and Release Overview. St. Paul, Minnesota, May 26, 1999.
7. Weppner, William A., 3M Company. Phase-Out Plan for POSF-Based Products, St. Paul, Minnesota, July 7, 2000.
8. R. Renner. 2006. "The Long and the Short of Perfluorinated Replacements." *Environmental Science and Technology*. 40: 12–13.
9. 3M Company. Sulfonated Perfluorochemicals in the Environment: Sources, Dispersion, Fate, and Effects. St. Paul, Minnesota, March 1, 2000.
10. 3M Company. The Science of Organic Fluorochemistry. St. Paul, Minnesota, February 5, 1999.
11. 3M Company. Perfluorooctane Sulfonate: Current Summary of Human Sera, Health and Toxicology Data. St. Paul, Minnesota, January 21, 1999.
12. Kudo, Naomi, et.al. "Comparison of the Elimination Between Perfluorinated Fatty Acids with Different Carbon Chain Lengths in Rats." *Chemico-Biological Interactions*. Volume 134(2), 2001, pp. 203-216.

13. Goeke-Flora, Carol M. and Nicholas V. Reo. "Influence of Carbon Chain Length on the Hepatic Effects of Perfluorinated Fatty Acids, A¹⁹F- and ³¹P-NMR Investigation." *Chemical Research in Toxicology*, 9(4), 1996, pp. 689-695.
14. Dixon, David A. "Fluorochemical Decomposition Processes," Theory, Modeling, and Simulation, William R. Wiley Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland Washington, April 4, 2001.
15. Organization for Economic Cooperation and Development (OECD), Environment Directorate. "Hazard Assessment of Perfluorooctane Sulfonate (PFOS) and its Salts," ENV/JM/RD(2002)17/FINAL, November, 21, 2002.
16. USEPA. "Perfluorooctyl Sulfonates; Proposed Significant New Use Rule." 65 FR 62319, October 11, 2000.
17. USEPA. "Perfluoroalkyl Sulfonates; Proposed Significant New Use Rule, Proposed Rule." 71 FR 12311, March 10, 2006.
18. Kissa, David. *Fluorinated Surfactants and Repellents*. Surfactant Science Series. Marcel Dekker, Inc.: New York. 2001.
19. The Carpet and Rug Institute. Letter from Werner H. Braun to Maria Doa, Director, CCD, OPPT, USEPA. January 16, 2012.
20. USEPA. "Market Profile for PFCs Used as Part of Carpets (contains confidential business information)." Washington, DC February 17, 2012.
21. USEPA. "Non-Confidential Summary for the Market Profile for PFCs Used as Part of Carpets." Washington, DC February 17, 2012.

22. Washington JW, Ellington JJ, Thomas MJ, Evans JJ, Hoon Yoo, Hafner SC (2009). Degradability of an acrylate-linked, fluorotelomer polymer in soil *Environmental Science and Technology*, 43(17), 6617-6623.

23. USEPA. Economic Analysis of the Significant New use Rule for Perfluoroalkyl Sulfonates and Long-Chain Perfluoroalkyl Carboxylate Chemical Substances. Prepared by Timothy Lehman and Abt Associates Inc. February 16, 2012.

XIV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

This action is not a “significant regulatory action” under the terms of Executive Order 12866, entitled *Regulatory Planning and Review* (58 FR 51735, October 4, 1993), and is therefore not subject to review by the Office of Management and Budget (OMB) under Executive Orders 12866 and 13563, entitled *Improving Regulation and Regulatory Review* (76 FR 3821).

B. Paperwork Reduction Act

According to the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 et seq., an Agency may not conduct or sponsor, and a person is not required to respond to a collection of information that requires OMB approval under the PRA, unless it has been approved by OMB and displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in Title 40 of the CFR, after appearing in the **Federal Register**, are listed in 40 CFR, part 9, and included on the related collection instrument, or form, if applicable. The information collection requirements related to this action have already been approved by OMB pursuant to the PRA under OMB control number 2070-0038 (EPA ICR No. 1188). This action does not impose any burden

requiring additional OMB approval. If an entity were to submit a SNUN to the Agency, the annual burden is estimated to average 110 hours per response. This burden estimate includes the time needed to review instructions, search existing data sources, gather and maintain the data needed, and complete, review, and submit the required SNUN. Send any comments about the accuracy of the burden estimate, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques, to the Director, Collection Strategies Division, Office of Environmental Information (2822T), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, D.C. 20460-0001. Please remember to include the OMB control number in any correspondence, but do not submit any completed forms to this address.

C. Regulatory Flexibility Act

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 et seq.), the Agency hereby certifies that promulgation of this SNUR would not have a significant adverse economic impact on a substantial number of small entities. The rationale supporting this conclusion is as follows. A SNUR applies to any person (including small or large entities) who intends to engage in any activity described in the rule as a “significant new use.” By definition of the word “new” and based on all information currently available to EPA, it appears that no small or large entities presently engage in such activity. Since this proposed SNUR would require a person who intends to engage in such activity in the future to first notify EPA by submitting a SNUN, no economic impact will occur unless someone files a SNUN to pursue a significant new use in the future or forgoes profits by avoiding or delaying the significant new use. Although some small entities may decide to conduct such activities in the future, EPA cannot

presently determine how many, if any, there may be. However, EPA's experience to date is that, in response to the promulgation of over 1,000 SNURs, the Agency receives on average only 5 notices per year. Of those SNUNs submitted, only one appears to be from a small entity in response to any SNUR. Therefore, EPA believes that the potential economic impact of complying with this SNUR is not expected to be significant or adversely impact a substantial number of small entities. In a SNUR that published as a final rule on August 8, 1997 (62 FR 42690)(FRL-5735-4), the Agency presented its general determination that proposed and final SNURs are not expected to have a significant economic impact on a substantial number of small entities, which was provided to the Chief Counsel for Advocacy of the Small Business Administration. EPA has prepared an economic analysis of this action, which is contained in a document entitled *Economic Analysis of the Significant New Use Rule for Perfluoroalkyl Sulfonates and Long-Chain Perfluoroalkyl Carboxylate Chemical Substances* (Ref. 23). A copy of the economic analysis is available in the docket for this final rule and is summarized in Unit XII.

D. Unfunded Mandates Reform Act

Based on EPA's experience with proposing and finalizing SNURs, State, local, and Tribal governments have not been impacted by these rulemakings, and EPA does not have any reason to believe that any State, local, or Tribal government would be impacted by this rulemaking. As such, EPA has determined that this regulatory action would not impose any enforceable duty, contain any unfunded mandate, or otherwise have any effect on small governments subject to the requirements of sections 202, 203, 204, or 205 of the Unfunded Mandates Reform Act of 1995 (UMRA) (Public Law 104-4).

E. Executive Order 13132: Federalism

This action would not have a substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, entitled *Federalism* (64 FR 43255, August 10, 1999).

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This proposed rule would not have Tribal implications because it is not expected to have substantial direct effects on Indian Tribes. This proposed rule would not significantly or uniquely affect the communities of Indian Tribal governments, nor would it involve or impose any requirements that affect Indian Tribes. Accordingly, the requirements of Executive Order 13175, entitled *Consultation and Coordination with Indian Tribal Governments* (65 FR 67249, November 9, 2000), do not apply to this proposed rule.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045, entitled *Protection of Children from Environmental Health Risks and Safety Risks* (62 FR 19885, April 23, 1997), because this is not an economically significant regulatory action as defined by Executive Order 12866, and this action does not address environmental health or safety risks disproportionately affecting children.

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use

This proposed rule is not subject to Executive Order 13211, entitled *Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use* (66 FR 28355, May 22, 2001), because this action is not expected to affect energy supply, distribution, or use.

I. National Technology Transfer Advancement Act

Since this action does not involve any technical standards; section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104-113, section 12(d) (15 U.S.C. 272 note), does not apply to this action.


J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

This action does not entail special considerations of environmental justice related issues as delineated by Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 7629, February 16, 1994).

List of Subjects in 40 CFR Part 721

Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements.

Dated: AUG - 7 2012



Wendy Cleland-Hamnett,

Director, Office of Pollution Prevention and Toxics.

Therefore, it is proposed that 40 CFR chapter I be amended as follows:

PART 721--[AMENDED]

1. The authority citation for part 721 continues to read as follows:

Authority: 15 U.S.C. 2604, 2607, and 2625(c).

2. Add §721.10xxx to subpart E to read as follows:

§721.10xxx Long-chain perfluoroalkyl carboxylate chemical substances.

(a) *Definitions.* The definitions in § 721.3 apply to this section. In addition, the following definition applies: *Carpet* means a finished fabric or similar product intended to be used as a floor covering. This definition excludes resilient floor coverings such as linoleum and vinyl tile.

(b) *Chemical substances and significant new uses subject to reporting.*

(1) The chemical substances identified below, where $n > 5$ or $m > 6$, are subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

a. $\text{CF}_3(\text{CF}_2)_n\text{-COO}^-\text{M}$ where $\text{M} = \text{H}^+$ or any other group where a formal dissociation can be made;

b. $\text{CF}_3(\text{CF}_2)_n\text{-CH=CH}_2$;

c. $\text{CF}_3(\text{CF}_2)_n\text{-C(=O)-X}$ where X is any chemical moiety;

d. $\text{CF}_3(\text{CF}_2)_m\text{-CH}_2\text{-X}$ where X is any chemical moiety;

e. $\text{CF}_3(\text{CF}_2)_m\text{-Y-X}$ where Y = non-S, non-N hetero atom and where X is any chemical moiety, and

f. structurally similar degradation products of any of the compounds in a through e above.

(2) *Significant new uses.* The significant new uses for chemical substance identified in paragraph (b)(1) of this section are: manufacture, import, or processing for use as part of carpets or to treat carpets (e.g., for use in the carpet aftercare market).

(c) *Specific requirements.* The provisions of subpart A of this part apply to this section except as modified by this paragraph.

(1) *Revocation of certain notification exemptions.* With respect to imports of carpets, the provisions of §721.45(f) do not apply to this section. A person who imports a chemical substance identified in this section as part of a carpet is not exempt from submitting a significant new use notice. The other provision of §721.45(f), respecting processing a chemical substance as part of an article, remains applicable.

3. Amend § 721.9582 as follows:

(a) Revise the introductory text of paragraph (a)(1) to read as follows:

§ 721.9582 Certain perfluoroalkyl sulfonates.

(a) *Chemical substances and significant new uses subject to reporting.* (1) The chemical substances listed in Table 1, Table 2, Table 3, and Table 4 of this section are subject to reporting under this section for the significant new uses described in paragraph (a)(2) of this section.

* * * * *

(b) Add Table 4 to paragraph (a)(1) to read as follows:

(a) * * * * *

Table 4.—Fourth Set of PFAS Chemicals Subject to Reporting

Premanufacture Notice Case No.	Generic Chemical Name
P-83-0126	Modified fluoroaliphatic adduct
P-90-0110	Fluorochemical epoxide
P-94-1508	Fluorinated polysiloxane
P-94-1509B	Fluorinated polysiloxane
P-98-0809	Fluorochemical esters
P-99-0296	Fluoroalkyl derivative
P-01-0035	Perfluorooctane sulfonate

(c) Revise paragraphs (a)(2), (a)(3), (a)(4), and (a)(5) and add paragraph (b) to read as follows:

(a) * * * * *

(2) The significant new uses are:

(i) Manufacturing, importing, or processing of any chemical substance listed in Table 1 of paragraph (a)(1) of this section for any use.

(ii) Manufacturing, importing, or processing of any chemical substance listed in Table 2 of paragraph (a)(1) of this section for any use, except as noted in paragraph (a)(3) of this section.

(iii) Manufacturing, importing, or processing of any chemical substance listed in Table 3 of paragraph (a)(1) of this section for any use, except as noted in paragraphs (a)(3) through (a)(5) of this section.

(iv) Manufacturing, importing, or processing of any chemical substance listed in Table 4 of paragraph (a)(1) of this section for any use.

(3) Manufacturing, importing, or processing of any chemical substance listed in Table 2 and Table 3 of paragraph (a)(1) of this section for the following specific uses shall not be considered as a significant new use subject to reporting under this section:

(i) Use as an anti-erosion additive in fire-resistant phosphate ester aviation hydraulic fluids.

(ii) Use as a component of a photoresist substance, including a photo acid generator or surfactant, or as a component of an anti-reflective coating, used in a photomicroolithography process to produce semiconductors or similar components of electronic or other miniaturized devices.

(iii) Use in coating for surface tension, static discharge, and adhesion control for analog and digital imaging films, papers, and printing plates, or as a surfactant in mixtures used to process imaging films.

(iv) Use as an intermediate only to produce other chemical substances to be used solely for the uses listed in paragraph (a)(3)(i), (ii), or (iii) of this section.

(4) Manufacturing, importing, or processing of tetraethylammonium perfluorooctanesulfonate (CAS No. 56773-42-3) for use as a fume/mist suppressant in metal finishing and plating baths shall not be considered as a significant new use subject to reporting under this section. Examples of such metal finishing and plating baths include: hard chrome plating; decorative chromium plating; chromic acid anodizing; nickel, cadmium, or lead plating; metal plating on plastics; and alkaline zinc plating.

(5) Manufacturing, importing, or processing of: 1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, potassium salt (CAS No. 3872-25-1); Glycine, N-ethyl-N-[(tridecafluorohexyl)sulfonyl]-, potassium salt (CAS No. 67584-53-6); Glycine, N-ethyl-N-[(pentadecafluoroheptyl)sulfonyl]-, potassium salt (CAS No. 67584-62-7); 1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, ammonium salt (CAS No. 68259-07-4); 1-Heptanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- (CAS No. 68957-62-0); Poly(oxy-1,2-ethanediyl), .alpha.-[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]-.omega.-methoxy- (CAS No. 68958-60-1); or 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1) (CAS No. 70225-16-0) for use as a component of an etchant, including a surfactant or fume suppressant, used in the plating process to produce electronic devices shall not be considered a significant new use subject to reporting under this section.

(b) [Reserved]