

# U.S. EPA Activities on Perfluorinated Chemicals

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OECD Webinar on Recent PFC Related Activities  
October 27, 2010

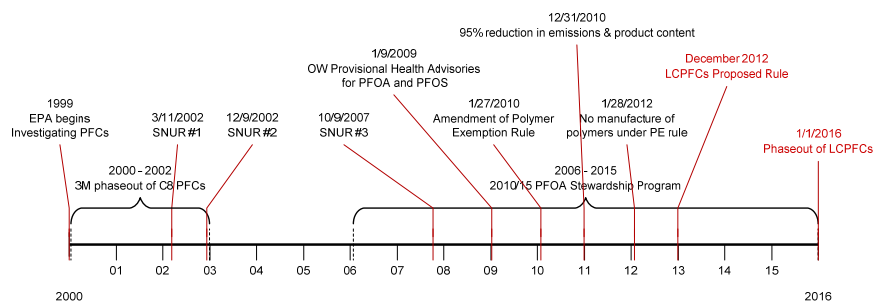


## Overview

- Perfluorinated chemicals (PFCs) are substances with special properties that have thousands of important applications
- EPA is investigating PFCs because
  - They are found world-wide in the environment, in wildlife, and in humans
  - They are persistent in the environment and some can remain in people for years
  - Some PFCs cause developmental, systemic, and other adverse effects in laboratory animals
  - For some PFCs, there's a narrow margin between the dose that causes mild effects and a dose that causes severe effects in animals
- While we don't know what the adverse effect level would be in people, we believe it's important to limit future releases of these chemicals
- Mitigate exposures at the source
  - PFAS Significant New Use Rules
  - 2010/15 PFOA Stewardship Program
  - LCPFCs Action Plan
- Manage alternatives
  - New Chemicals Program



# Timeline



## 2010/15 PFOA Stewardship Program

- In January 2006, EPA invited eight major companies in the fluoropolymer and fluorotelomer industries to commit to a voluntary program with global goals
- Goals
  - Commit to achieve, no later than 2010, 95% reduction in *both* facility emissions to all media *and* product content of PFOA, PFOA precursor chemicals, and related higher homologue chemicals, measured from a year 2000 baseline
  - Commit to working toward elimination of PFOA, PFOA precursors, and related higher homologue chemicals from emissions and products by 2015
- Participating companies
  - Arkema, Asahi, Ciba, Clariant, Daikin, DuPont, 3M/Dyneon, Solvay Solexis
  - Report annual progress in terms of both U.S. and global operations
  - Reports due on October 31 of each year
- More information at <http://epa.gov/oppt/pfoa/pubs/stewardship/index.html>

## New Chemical Review of Alternatives

- EPA is reviewing substitutes for LCPFCs as part of its review process for new chemicals under EPA's New Chemical Program
  - Ongoing since 2000
  - Consistent with the approaches to alternatives encouraged under the PFOA Stewardship Program
  - Over 100 alternatives of various types have been received and reviewed by EPA
- Full toxicity and fate testing programs on new chemicals
  - EPA reviews the new substances against the range of issues that have caused past concerns with PFCs, as well as any issues that may be raised by new chemistries
  - Reviews typically consider decomposition products, fate, transport, bioaccumulation potential, toxicity, use patterns, potential exposures and releases
  - Consent Orders with companies specify additional testing, other controls where necessary on new chemicals that make it through review
- More information at <http://epa.gov/oppt/pfoa/pubs/altnewchems.html>

## Amendment of Polymer Exemption Rule

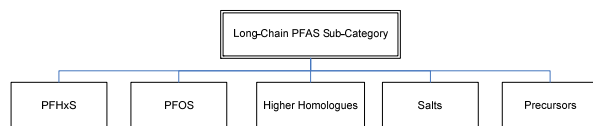
- Polymer exemption was originally established in 1984, modified in 1995
  - Exempts eligible polymers from having to go through the full new chemical premanufacture notice (PMN) and review process
  - Statutory basis for exemption is that eligible polymers “will not present” an unreasonable risk to health, environment
- Final rule (75 FR 4295) published on January 27, 2010
  - EPA can no longer presume or conclude that these polymers “will not present” an unreasonable risk
  - *Not* a finding that these polymers *would present* a risk
  - Amends the polymer exemption rule to exclude from eligibility for the exemption polymers containing certain perfluoroalkyl moieties; polymers containing these substances will need to go through the PMN review process
  - Rule can be accessed at <http://edocket.access.gpo.gov/2010/pdf/2010-1477.pdf>
- January 27, 2012
  - After this date, manufacture of these polymers will no longer be authorized under the polymer exemption rule

## Remaining Possible Scenarios of Concern

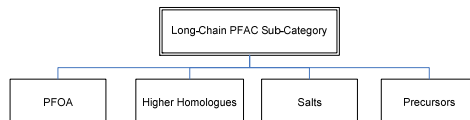
- Long-chain PFAS chemicals
  - Direct releases to the environment from U.S. facilities as a result of few existing uses
  - Direct releases to the environment from non-U.S. facilities, resulting in transboundary environmental transport to United States
  - Articles containing PFAS chemicals could release PFCs, significantly increasing the magnitude and duration of exposure to humans and the environment to these chemicals
- Long-chain PFAC chemicals
  - Direct releases to the environment from U.S. facilities not participating in PFOA Stewardship Program
  - Direct releases to the environment from non-U.S. facilities not participating in PFOA Stewardship Program, resulting in transboundary environmental transport to U.S.
  - Articles, including imports, releasing PFAC as a result of their residual content in fluorotelomer-based products and/or as the fluorotelomers-based polymers in articles biodegrade

## LCPFCs Action Plan: Chemicals Included

- Long-chain perfluoroalkyl sulfonates (PFAS)



- Long-chain perfluoroalkyl carboxylates (PFAC)



## LCPFCs AP: Overview

- LCPFCs AP published in December 2009
  - <http://www.epa.gov/oppt/existingchemicals/pubs/actionplans/pfcs.html>
- EPA intends to consider initiating rulemaking on LCPFCs under the Toxic Substance Control Act (TSCA) section 6
  - TSCA section 6 provides authority for EPA to ban or restrict the manufacture (import), processing, and use of these chemicals
  - Detailed cost/benefit analysis to evaluate whether EPA can make the TSCA section 6 "presents or will present an unreasonable risk" findings
  - If these more detailed assessments indicate that a different approach to risk management is appropriate, EPA will consider additional approaches

## LCPFCs AP: Next Steps

- Publish a proposed rule in 2012 with actions under TSCA to adequately address unreasonable risk from LCPFCs
- Continue the 2010/15 PFOA Stewardship Program
- Continue to evaluate alternatives in the New Chemicals Program
- Work cooperatively with other countries on this global issue

## Information Sources

- EPA website: [www.epa.gov/oppt/pfoa](http://www.epa.gov/oppt/pfoa)
- PFOS, PFOA-related electronic dockets at [www.regulations.gov](http://www.regulations.gov)
  - EPA-HQ-OPPT-2002-0043 (PFOS SNURs)
  - EPA-HQ-OPPT-2002-0051 (Polymer Exemption)
  - EPA-HQ-OPPT-2003-0012 (PFOA ECA Process)
  - EPA-HQ-OPPT-2003-0071 (FP Incineration)
  - EPA-HQ-OPPT-2004-0001 (Telomer Incineration)
  - EPA-HQ-OPPT-2004-0112 (3M MOU)
  - EPA-HQ-OPPT-2004-0113 (DuPont MOU)
  - EPA-HQ-OPPT-2005-0015 (Follow-up PFAS SNUR)
  - EPA-HQ-OPPT-2006-0621 (Stewardship Program)
  - EPA-HQ-OPPT-2010-0145 (Action Plan)
- Non-regulatory AR-226 data repository of information on PFCs currently available on 20+ CD-ROM media from EPA OPPT Docket Office, [oppt.ncic@epa.gov](mailto:oppt.ncic@epa.gov)
- Project Coordinator:
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