

Re: Action Plan for the Assessment and Management of Perfluorinated Carboxylic Acids and their Precursors

Comments on Canada Gazette Notice, Part I, Vol. 140, No. 24 (June 17, 2006) and Notice of Action Plan

Submitted to:
Environment Canada
Health Canada

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Introduction

The Canadian Environmental Law Association (CELA) is pleased to respond to the **Canada Gazette Notice, Part 1, Vol. 140, No. 24 – Notice of Action Plan for the Assessment and Management of Perfluorinated Carboxylic Acids and their Precursors and Risk Management Strategy**. CELA proposed twenty four recommendations to ensure that the Action Plan to assess and manage perfluorinated carboxylic acid and its precursors is comprehensive and aims to eliminate these substances in Canada.

Comments on the Canada Gazette Notice

CELA supports the proposal to add the following four fluorotelomer based substances to Schedule 1 of the Canadian Environmental Protection Act (CEPA):

- Hexane, 1,6-diisocyanato-, homopolymer, reaction products with alpha-fluoro-omega-2-hydroxyethylpoly(difluoromethylene), alkylbranched alcohols and 1-alkanol
- 2-propenoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethyl methacrylate, gamma-omega-perfluoro-C10-16-alkyl acrylate and stearyl methacrylate
- 2-propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with butyl 2-propenoate and unsaturated anhydride, perfluoroalkyl esters, tert-Bu benzenecarboxyate-initiated
- Perfluoroalkylhydroxyaminoazetidinium

In addition, CELA supports the effort to add the above substances to the *Prohibition of Certain Toxic Substances Regulation*. However, we are expressing our objection to the proposed regulatory text outlining the notice to include an annex to the Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005 (Four New Fluorotelomer based substances). The annex as proposed in Part 2 of the proposed amendments to the Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005, creates an opportunity for on-going production of products containing these toxic substances in Canada. Given the knowledge gained from the notification process, Canada should be establishing a national process that supports a phased-out approach to these substances and other toxic substances found in manufactured items. As proposed, the current amendment to Schedule 1 of the Prohibition of Certain Toxic Substances Regulations, 2005 indicates a shift that will result in the weakening of the regulation. The legal text outlined in Part 2 of the Notice should be explicit to state that the prohibition on these substances cannot guarantee that imported products containing fluorotelomer based substances and subsequently PFCA will be effectively identified and kept out of the Canadian market.

The inclusion of the proposed amendment is disheartening. In 2004-2005, during the initial phases of reviewing the issues relevant for the five-year review of CEPA 1999, Environment Canada and Health Canada explicitly recognized the shortcomings of CEPA in managing toxic substances in products. The public anticipated that further dialogue to address these shortcomings would be pursued by the government. However, such a discussion has not materialized. Despite the growing number of studies demonstrating the extent of exposure to humans from toxic substances detected in products, the government's proposed amendments for the regulation represents a public display of a shift by government for immediately addressing toxic substances in products. It also cripples on-going dialogue that should focus on how to prevent the release and creation of toxic substances at all points of the life cycle of a substance, including the disposal of products containing these substances. Overall, retaining this amendment sends a signal to the public that products with toxic substances are acceptable and addressing toxic substances in manufactured products is not a priority for the government

We strongly urge the government to retreat from this proposal. Instead, the government should establish a multi-stakeholder process that would effectively address the on-going problem with imported products containing CEPA toxic substances. Management tools, such as labelling and testing of products for toxic substances, which have not been exercised to any extent in controlling the import of manufactured goods should be part of an integrated approach that has strong regulatory backing. There is sufficient evidence outlining Canada's failure to protect the health of Canadians, in particular children, from exposure to toxic substances, such as lead, by continuing to allow the import of products and manufactured items containing toxic substances. The Canadian Partnership for Children's Health and Environment released a report, *Child Health and Environment – A Primer* (2005) effectively outlining the failure of the government's regulatory regime to prevent the exposure of toxic substances found in consumer products to children. Recent biomonitoring efforts in Canada suggest that a range of toxic substances, including perfluorinated substances and brominated flame retardants (BFRs) are being detected in Canadians. Furthermore, many of the dust studies that demonstrate detected levels of toxic substances such as perfluorinated substances and BFRs in dust samples may be the dominant route of exposure of toxic substances to children. The source of these toxic substances is thought to be from consumer products. The Canadian regulatory framework has been ineffective in eliminating exposure of toxic substances from consumer products. Hence, the government should require importers to label the substances found in products entering the Canadian market. Until adequate testing protocols are established, at a minimum, substances that are listed in the Prohibition of Certain Toxic Substances Regulation should not be allowed to enter into the Canadian market, even in manufactured items.

Recommendation 1: We support the inclusion of the four fluorotelomer based substances to Schedule 1 of CEPA.

Recommendation 2: We support the inclusion of the four fluorotelomer based substances under the Prohibition of Certain Toxic Substances Regulations, 2005.

Recommendation 3: We reject the proposed subsection (2) which states “Subsection (1) does not apply to a product that is a manufactured item....., if a toxic substance set out in Part 2 of Schedule 1 is present in that manufactured item.”

Recommendation 4: We reject the proposal to amend the Prohibition of Certain Toxic Substances Regulation to add an annex to Schedule 1 that will prohibit toxic substances unless present in manufactured items. The four fluorotelomer based substances are proposed to be added to this annex.

Recommendation 5: We recommend creating a multi-stakeholder process to discuss how toxic substances in manufactured items can be managed through the regulatory process. The aim of this process is to prohibit use of toxic substances in manufactured or imported items into Canada. One option that should be considered by government is requiring importers to label substances found in products entering the Canadian market. Until adequate testing protocols are established, at a minimum, substances that are listed in the Prohibition of Certain Toxic Substances Regulation should not be allowed to enter into the Canadian market, even in manufactured items.

Use of regulatory tools

The addition of the annex to Schedule 1 of the *Prohibition of Certain Toxic Substances Regulation* raises other concerns regarding the government’s commitment to extended producer responsibility and pollution prevention strategies. The notice outlines a brief rationale for proposing a regulation, which we support. However, we know that other tools including pollution prevention plans and extended producers responsibility described in the notice has the potential to contribute to the overall objectives of an Action Plan on fluorotelomer based substances, identifying and taking action on substance that contribute to the formation of PFCA substances. While these tools are not appropriate in this context, these tools should be integrated as important components of an Action Plan on PFCAs. The effectiveness of these tools will be dictated to some extent by the use of strong regulatory framework for eliminating PFCAs in Canada. More specifically, taking action on substances contributing to PFCA formation that are listed on the DSL will require an effective process for identifying these DSL substances, the opportunities for reduction and elimination of these substances and identifying available safe alternatives.

Recommendation 6: In the development and implementation of an Action Plan on PFCAs and its precursors, the implementation of regulatory tools such as pollution prevention plans and use of alternatives can support the overall goal of elimination and prevention of PFCAs. These tools should be reviewed for their applicability.

Specific Comments on the Action Plan for the Risk Assessment and Risk Management Plan of Perfluorinated Carboxylic Acids and their Precursors

On March 7, 2006 and March 27, 2006, CELA and Dr. Rich Purdy submitted substantive comments on the proposed Action Plan for Perfluorinated Carboxylic Acids and their Precursors. We wish to resubmit this report for your consideration as they remain relevant and appropriate (forwarded separately) for this Canada Gazette Notice. Below is a summary of the comments and recommendations submitted for a draft Action Plan on PFCAs.

- A proposed Action Plan should be focused on the class of perfluorinated substances not only those that breakdown to PFCAs. The Action Plan should include perfluorooctane sulfonates (PFOS) and perfluorinated carboxylic acids (PFCAs), fluorotelomer based substances, perfluorooctanoic acids (PFOAs) and other perfluorinated substances.
- There is sufficient evidence to demonstrate the potential hazards of these substances to the environment and human population. There is sufficient evidence to suggest that the class of perfluorinated substances demonstrates similar if not the same modes of actions, sites of toxic action, unique mode of bioaccumulation and modes of environmental transport that warrant attention as a class. Various members of this class or family of substances react and breakdown to other forms of perfluorinated substances. Research studies and biomonitoring reports indicate the wildlife species and humans demonstrate detectable levels of many of these substances. Canada's environment remains a sink for domestic use of these substances but also for other perfluorinated substances travelling from other part of the globe.
- Studies demonstrate that varying chain lengths of PFCAs (short and long chains) are suspected of having different persistence and bioaccumulation. The Action Plan should not specifically focus only on chain lengths measuring greater than or equal to 9 carbon chains. Chain lengths less than 9 may be considered as replacements for longer chains, therefore it leave little to no incentive for facilities to consider safer alternatives to PFCAs. Further, targeting chain lengths > or equal to 9 is very limiting. It excludes perfluorooctanoic acids (PFOAs) with a chain length of 8 carbon chains.
- Shorter chain length PFCAs also require further consideration. A cumulative assessment of these substances should be undertaken and the Action Plan be developed to capture these substances.
- The proposed Action Plan should also include a process to address toxic substances, PFCAs, found in consumer products.

- Recent Canada Gazette Notices to add perfluorooctanoic sulfonates (PFOS) its salts and precursors to the Schedule 1 of CEPA (Toxic Substances List) and propose an amendment to the Prohibition of Certain Toxic Substances Regulation, 2005 under CEPA along with the proposed continued prohibition on four fluorotelomer based substances demonstrate a need for a more comprehensive Action Plan on perfluorinated substances.
- The main elements of the Action Plan on perfluorinated substances should include:
 - List of perfluorinated substances to be targeted for assessment and management
 - Timelines for reduction and eventual elimination of perfluorinated substances
 - An effective public participation component in all phases of the Action Plan - development, implementation and review and revision phases.
 - A public reporting mechanism for reporting progress and challenges of implementing the Action Plan. This report should be released annually in print and online.
 - Outline disposal method for perfluorinated substances, in particular, those found in products. CELA outlined its objection to include incineration process as a viable option for managing waste containing perfluorinated substances as incineration results in the formation and release of other toxic substances including heavy metals, dioxins and furans, etc.
 - Research, development and promotion of alternatives including establishing criteria to identify appropriate alternatives is required. Acceptable alternatives would be those that do not exhibit hazardous properties.
 - Monitoring programs to determine the levels of perfluorinated substances in sensitive subpopulations and ecosystems.
 - Need to add require additional safety margins to account for unique risk of exposure to children.
 - The Proposed Action Plan should include a process to initiate dialogue on how PFCAs in consumer products may be managed and addressed in the current regulatory framework.
 - The Action Plan should outline what action will be taken on all fluorotelomer based substances that meet the categorization criteria under CEPA and the fluorotelomer based substances that do not meet the categorization criteria.

- The Action Plan should include clear timelines and targets for reduction and eventual elimination of PFCAs and fluorotelomer based substances that breakdown to PFCAs.
- A process to review and revise the Action Plan. This mechanism should include the frequency of the review process, a public participation component and how the Action Plan will be revised to address issues raised from the review process.

Recommendation 7: The recommendation presented by CELA-Dr. Rich Purdy in submissions dated March 7 and March 27th 2006 should be reviewed in the context of the proposed Action Plan. An overarching comment on the proposed Action Plan was to expand the scope of the plan for assessment and management of all perfluorinated substances.

The following paragraphs outline additional comments with regards to the propose Action Plan on PFCAs and their precursors.

Generally, the proposed Action Plan provides a good starting point to identify the different efforts being undertaken to address other perfluorinated substances (i.e., status of PFOA assessment and data collection and generation for other PFCAs). It also provides a good summary of the health and environmental assessments completed on the four fluorotelomer based substances by the Departments of Health and Environment with a conclusion that “the notified substances meet the criteria set out in paragraph 64 (a) and (c) of the Act.

However, it is appropriate to identify the elements of the Action Plan that require strengthening and expanding.

Objectives of the Action Plan

The overall objective of the Action Plan is to set goals on what is needed to address substances that contribute to the formation of PFCA that are currently found on the Domestic Substances List (DSL). While we support the goal to “seek action from industry to significantly reduce residuals,” the overall goal for the Action Plan in Canada should be on elimination, in the long term, on substances that are contaminated by PFCAs or substances that contribute to the formation of PFCAs. It is recognized that Canada cannot eliminate the exposure of Canadians to these substances because these substances enter into Canada from long range transport. However, Canada has the opportunity to send a strong message to the global community of its intent to aim for elimination. A goal short of elimination will place Canada in a precarious position given the goals of elimination of PFOA and longer chain PFCA and their precursors by 2015 announced by the US Environmental Protection Agency (EPA) in January 2006.

Recommendation 8: The Proposed Action Plan on PFCAs should have an overall goal of elimination of all substances contributing to the formation of PFCAs in Canada in the long term.

Recommendation 9: The goal of elimination should be supported by strong regulatory framework.

The objective of the Action Plan should not be limited to taking action (i.e., assessments, research and management) on long chain PFCAs greater than or equal to 9. Despite the current efforts by Canada to complete its assessment of the PFOAs, an 8 carbon chain PFCA, the Action Plan should ensure that the plan covers all substances that result in the formation of PFCAs. This should include action on short and long chain PFCAs. The CELA-Dr. Rich Purdy joint submission of March 7th and 27th, 2006 outlined that there is sufficient evidence to demonstrate that varying chain lengths of PFCAs (i.e., short chain lengths) are also found to bioaccumulate in organisms.

Recommendation 10: The objective of the Action Plan should aim to take action (i.e., assessment, research and management) on all chain lengths of PFCAs, hence, not limiting it to chain length greater than or equal to 9.

Finally, the proposed Action Plan articulates that “Prohibiting all existing long chain PFCA precursors is not considered a viable strategy at this time.” The justification for this approach is inadequate and does not follow a precautionary principle given the findings from assessments undertaken through the New Substances Notification stream.

Recommendation 11: We reject the notion that prohibiting all existing long chain PFCA precursors is not considered a viable strategy at this time.

List of Specific PFCAs

An important element required in an Action Plan on perfluorinated substances should be a list of substances to be targeted for action. This list is currently not provided in the Action Plan, although it was noted that “Environment Canada and Health Canada” will work with stakeholders to establish details of this action which would also include timelines, reduction targets and a reporting and accountability framework.”

The list of substances should identify all fluorotelomer based substances that are currently listed on the DSL. Further this list should distinguish which substances meet the categorization decisions (i.e., persistence and/or bioaccumulative and inherently toxic, or greatest potential for exposure) from those that do not meet the categorization decision. Since these substances may have similar functions and application, an Action Plan should explicitly outline the government’s efforts to assess all substances that breakdown to PFCAs and how they will be managed.

Recommendation 12: An Action Plan should include a comprehensive list of all perfluorinated substances (including all substances on the DSL) that the government aims to assess, conduct research and manage.

US EPA Stewardship program on PFOAs

The Action Plan provides a brief summary of the goals set out for the US EPA stewardship program. US outlined a corporate commitment to reduce PFOA by 95% by 2010 and the elimination of PFOAs by 2015. The stewardship program significantly targets PFCA residuals in consumer products. One element that was not included in the US program was the inclusion of a regulatory framework that would ensure accountability and effective action by affected industries in the event that the voluntary initiatives fail to meet goal of elimination in the established timelines. It should be noted that the goals outlined by US should provide the minimum level of action by Canada on PFCAs. It is worth noting again that the US EPA program aims to take action on PFOAs and contains a goal of elimination of longer chain PFCA by a targeted deadline. Currently, these elements are absent from the Canadian proposal for its Action Plan even as the assessment on PFOAs are in progress. We urge Canada to adopt these elements in its Action Plan on perfluorinated substances, and specifically on PFCAs.

Recommendation 13: We urge Canada to incorporate the findings of the assessment on PFOAs into the Action Plan on perfluorinated substances.

Recommendation 14: We urge Canada to adopt, as a minimum, the goal of elimination for PFOAs and other long chain PFCAs by 2015 supported with an effective regulatory framework.

Timeframe for action on assessments and management efforts

The proposed Action Plan indicates that a multi-stakeholder process will be conducted to establish timelines for work to be undertaken under the plan. It is important that the proposed Action Plan set an aggressive agenda for perfluorinated substances generally, but for PFCAs specifically. Timelines should focus on reduction with an ultimate goal for elimination. Another component that requires timelines to be established include timelines for public reporting on various aspects of the Action Plan. These dates provide a mechanism to ensure that the public and decision makers can adequately revise the Action Plan as required.

Recommendation 15: We support the need for establishing timelines that focus on reduction with an ultimate goal of elimination of perfluorinated substances and substances that result in PFCAs.

Recommendation 16: Timelines should be identified for public reporting on progress made under the Action Plan to provide accountability and a mechanism for revising the Action Plan.

Setting an research and policy agenda to address

Consideration of Regulatory tools for Management

The range of regulatory and non-regulatory tools was mentioned only in the context of management of the four fluorotelomer based substances. It is curious that the proposed Action Plan does not have a section specifying the various regulatory and non-regulatory tools Canada plans to deploy for managing PFCAs in Canada. It is important that any further action considered to address PFCAs include regulatory tools and not be based solely on voluntary initiatives.

Recommendation 17: The government should outline the range of regulatory (as well as non regulatory tools) it plans to deploy in implementing the Action Plan. Any effort to address PFCAs should include regulatory tools and not be based solely on voluntary initiatives.

Pollution Prevention Plans

The consideration of pollution prevention plans as a regulatory tool may not be appropriate for the four fluorotelomer based substances that are subject the proposed regulation. Since these substances have similar modes of action and function, we urge the government to adopt a requirement to complete Pollution Prevention Plans as a critical regulatory tool to target other fluorotelomer based substances that remain on the DSL.

Recommendation 18: CELA urges the government to adopt a requirement to complete Pollution Prevention Plans as a critical regulatory tool to target other fluorotelomer based substances that remain on the DSL.

Market based Instruments

It is noted in the notice that market-based instruments could not effectively stop the entry of fluorotelomer based substances in imported or manufactured products. However, it was also noted that this type of instrument can be used as a step towards phasing out occurring substances and as a means to implement extended producers responsibility. In our view, any use of market based instruments could be effective when used in combination with regulatory action. We would not support the use of market based instruments alone to promote phase out promoting extended producer responsibility. These steps should include concrete timelines that would allow market based instruments to take effect. Failure to see the trend for reduction and ultimate reduction should be supported by regulation in a timely way.

Recommendation 19: Any use of market based instruments could be effective when used in combination with regulatory action. We would not support the use of market based instruments alone to promote phase out promoting extended producer responsibility.

Applying precautionary principle

The evidence gathered on the four fluorotelomer based substances demonstrates that the residuals of FTOH and formation of breakdown products, PFCAs, are persistent and bioaccumulative and toxic. Sufficient evidence indicates that formation of these substances occurs at various stages in the lifecycle of the production and product life span. The use of these substances is extensive: treatment to carpets, textiles, released from paints and coatings, and protection for stones, tiles and in fire fighting foams and inks. Despite the limited information known about the rate at which formation of PFCAs occurs and the mechanism for the formation of PFCAs, the information suggest that the precautionary principle should guide the development of the Action Plan.

The Canadian research agenda and any assessments to be conducted on PFCA substances should apply the precautionary principle. Industries that wish to continue the use these substances should be required to provide necessary data to demonstrate safety of the substance otherwise continued use of substances suspected of contributing to the formation of PFCAs should be stopped.

The current research agenda outlined in the Action Plan lists several good research institutions for furthering the work on PFCAs, including the National Water Research Institute, Canadian Wildlife Services, Meteorological Service of Canada and the University of Toronto to start. While we are very supportive that the research on PFCAs should be expanded to include specific monitoring and biomonitoring program, the absence or maturity of such programs should not be used to limit the action that can be taken on these substances.

Recommendation 20: The precautionary principle should be applied in the assessments of PFCAs. Industry should be required to provide data to demonstrate safety of these substances.

Recommendation 21: The research agenda should be expanded to include monitoring and biomonitoring of PFCAs. However, the absence or maturity of such programs should not used as the reason for not taking action on PFCAs to protect the environment and human health.

Identifying and promoting alternatives to fluorotelomer based substances and PFCAs

The section on identifying and promoting alternatives to fluorotelomer based substances and PFCAs should be enhanced. Currently there are a few referenced efforts to identify and promote alternatives. The government indicates that efforts are being undertaken by industry to design alternative substances to the four fluorotelomer based substances assessed under the New Substances Program. Further the current prohibition is seen as an incentive for industry to develop alternatives. European efforts include a research program called PERFORCE which will facilitate the development of “an ecologically sound chemical replacement policy.” The summary section of the Action Plan suggests that

Canada will promote “research and development of alternatives that are preferable for the protection of human health and environment...”

Canada should include a comprehensive section in the Action Plan to outline how it will promote alternatives to PFCAs. Canada has various tools at its disposal to promote alternatives including: the use of extended producers responsibility programs (to address safe disposal methods for products containing PFCAs and precursors, labelling requirements) to target those retailers and manufacturers of fluorotelomer based substances; identify and list all fluorotelomer based substances from the DSL that meet the criteria for the categorization; impose a mandatory requirement for data generation by producers and users of fluorotelomer based substances still in use in Canada (listed under the DSL) if on-going use of fluorotelomer based substances is justified; education program targeting retailers on the hazardous properties of PFCAs and precursors. These tools can provide some incentives to industry to identify safe alternatives to fluorotelomer based substances or PFCAs.

However, before alternatives should be allowed on the Canadian market, Canada should develop a policy that outlines alternatives not to exhibit the same hazardous properties that are found in fluorotelomer based substances. Europe’s PERFORCE suggest a similar policy but does not include the criteria to be considered. At a minimal, alternatives should not be carcinogenic, mutagenic, genotoxic, persistent, bioaccumulative, neurotoxic, developmental and reproductive toxicant, a respiratory toxicant.

Recommendation 22: To promote the development and promotion of alternatives, Canada should implement various tools to promote alternatives including: the use of extended producers responsibility programs (to address safe disposal methods for products containing PFCAs and precursors, labelling requirements) to target those retailers and manufacturers of fluorotelomer based substances; identify and list all fluorotelomer based substances from the DSL that meet the criteria for the categorization; impose a mandatory requirement for data generation by producers and users of fluorotelomer based substances still in use in Canada (listed under the DSL) if there on-going use of fluorotelomer based substances is justified; education program targeting retailers.

Recommendation 23: Canada should develop a policy that requires alternatives not to exhibit the hazardous properties that are found in fluorotelomer based substances (i.e., carcinogenic, mutagenic, genotoxic, persistent, bioaccumulative, neurotoxic, developmental and reproductive toxicant, a respiratory toxicant).

Public Engagement in Development and Implementation of Action Plan

To date, public engagement to review the proposed action on the future of four fluorotelomer based substances under the New Substances Program is effective. We encourage this level of public participation in the development of this Action Plan as well as efforts to implement various components of the plan. Effective public engagement will

provide public accountability for the work outlined. To ensure that public engagement is sought throughout the implementation, a multi-stakeholder advisory group be established with adequate resources for engagement on all aspects of developing, implementing and monitoring efforts on perfluorinated substances.

Recommendation 24: To ensure that public engagement is sought throughout the implementation, a multi-stakeholder advisory group should be established with adequate resources for engagement on all aspects of developing, implementing and monitoring efforts to assess and manage all perfluorinated substances.

Summary

The above outlines elements of the proposed Action Plan on PFCAs and its precursors that should be enhanced. We had noted that the proposed action on PFCAs should be expanded to a National Action Plan on perfluorinated substances and include elements outlined throughout this submission including timelines, establishing a regulatory framework, establishing a goal of elimination, establishing a research and monitoring agenda, identifying and promoting alternatives. The National Action Plan would incorporate the proposed Action Plan for PFCAs and its precursors and aim to incorporate the risk management plan for PFOS. Finally, an Action Plan on perfluorinated would expand its scope to include all perfluorinated substances, in particular, varying chain lengths of PFCAs such as PFOAs (eight carbon chain lengths) and shorter chains as well.