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## Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2012

### Statutory authority

*Canadian Environmental Protection Act, 1999*

### Sponsoring departments

Department of the Environment and Department of Health

### REGULATORY IMPACT ANALYSIS STATEMENT

*(This statement is not part of the Regulations.)*

#### 1. Issues

The proposed *Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2012* (the proposed amendments) would address different issues with respect to Canada's management of five toxic substances to reduce harmful releases to the environment. These five substances are hexabromocyclododecane (HBCD); perfluorooctanoic acid, its salts, and its precursors (collectively referred to as PFOA); long-chain perfluorocarboxylic acids, their salts, and their precursors (collectively referred to as LC-PFCAs); polybrominated diphenyl ethers (PBDEs); and perfluorooctane sulfonate (PFOS). ([see footnote 1](#))

Final screening assessments conducted in 2012 by Environment Canada concluded that HBCD, PFOA, and LC-PFCAs are toxic to the environment under the *Canadian Environmental Protection Act, 1999* (CEPA 1999). ([see footnote 2](#)) Currently, there are no risk management instruments in place respecting preventive or control actions for HBCD in Canada. In the case of PFOA and LC-PFCAs, early risk management actions have been taken.

In addition, the proposed amendments provide an opportunity to amend and update existing regulatory controls under CEPA 1999 pertaining to PBDEs and PFOS.

The proposed amendments also include administrative changes to the *Prohibition of Certain Toxic Substances Regulations, 2012* (the Prohibition Regulations 2012), ([see footnote 3](#)) some of which were requested by the Standing Joint Committee for the Scrutiny of Regulations (SJCSR).

#### 2. Background

The proposed amendments have been developed as part of Canada's Chemicals Management Plan (CMP). The CMP is Canada's main initiative to protect human health and the environment by assessing substances in Canadian commerce, manufactured or imported in a certain quantity or used for manufacturing purposes in Canada and taking action on substances determined to be toxic under the definition of CEPA 1999. Specifically, when a categorized substance has been determined to be toxic under CEPA 1999 and has been recommended to be added to Schedule 1, instruments respecting preventive or control actions are required to be published in relation to the substance. The publication of instruments respecting preventive or control actions in these cases must take place within a required time period set under CEPA 1999. In the case of substances that are determined to meet the criteria for virtual elimination, the taking of such actions is required under CEPA 1999.

The Prohibition Regulations 2012, which were developed under CEPA 1999, came into force on March 14, 2013. They prohibit the manufacture, use, sale, offer for sale, or import of specified toxic substances and products that contain these substances, with some exemptions.

## 2.1 Background and context for HBCD

HBCD is used primarily as a flame retardant in insulation materials in the construction industry. The final screening assessment report for HBCD concluded that HBCD meets the criteria under paragraph 64(a) of CEPA 1999, as it is entering or may be entering the environment in a quantity or a concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity. (see footnote 4) In fact, the substance HBCD has demonstrated ecotoxicity in both aquatic and terrestrial species. The assessment report also concluded that HBCD meets the criteria for persistence and bioaccumulation, as defined in the *Persistence and Bioaccumulation Regulations* made under CEPA 1999. In addition, the report concluded that HBCD meets the virtual elimination criteria set out in subsection 77(4) of CEPA 1999. HBCD was added to the List of Toxic Substances in Schedule 1 to CEPA 1999 in 2012.

### 2.1.1 Current uses

HBCD is one of the largest volume flame retardants being manufactured globally today. Its major end-use application has been in the production of expanded polystyrene (EPS) and extruded polystyrene (XPS) foam, and both products are mostly used in insulation materials in the construction industry. EPS and XPS foam in building and construction applications account for approximately 99% of HBCD use in Canada.

Other minor and historical uses of HBCD include its use in high-impact polystyrene for electrical and electronic parts, in polymer dispersions as a coating agent for residential and commercial textiles (upholstered furniture, transportation seating, automobile interior textiles, wall coverings and draperies), and in EPS and XPS foam for transportation applications.

While HBCD is not currently manufactured in Canada, it is imported into Canada mainly for the production of intermediate and finished EPS and XPS products. A study conducted for Environment Canada estimated that in 2012 approximately 363 tonnes of HBCD were imported for the production of XPS foam and EPS resin, as well as within EPS resin. Of this total, approximately 27 tonnes of HBCD were exported within EPS resin, which translates to approximately 336 tonnes of net HBCD consumption in Canada. (see footnote 5) This study also reported that there may be a low volume of imports of high-impact polystyrene and textiles into Canada containing HBCD in very niche applications.

### 2.1.2 Release profile

Based on 2012 HBCD import and use data, there is little expected release from imported HBCD (approximately 363 tonnes). It is estimated that 92.4% of imported HBCD (approximately 336 tonnes) will eventually be landfilled as a component of EPS and XPS foams, and 7.5% of imported HBCD (approximately 27 tonnes) was exported within EPS resin. The remaining 0.1% of imported HBCD (approximately 0.4 tonnes) was released during the manufacture of EPS and XPS foams and EPS resins and use of EPS and XPS foams. Table 1 and Table 2 show the release details by media and by activity for EPS and XPS foams containing HBCD.

Table 1: Release of HBCD contained in EPS and XPS by media in 2012

Release media	Quantity (Tonnes)	Percentage of Imported HBCD
Release to solid waste	0.03	0.01%
Release to air	0.17	0.05%
Release to water	0.17	0.05%
Total (rounded figures)	0.40	0.10%

Source: Cheminfo Services

Table 2: Release of HBCD contained in EPS and XPS by activity in 2012

Production activity	Quantity (Tonnes)	Percentage of Imported HBCD
Release during manufacturing operations	0.04	<0.1%
Release during service life	0.32	0.1%
Release during disposal	0.00	0.0%

Total (rounded figures)	0.40	0.1%
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Source: Cheminfo Services

### 2.1.3 Current Canadian risk management

Currently, HBCD is not subject to any federal risk management measures.

### 2.1.4 Risk management activities in other jurisdictions

#### *United States*

The United States Environmental Protection Agency (U.S. EPA) announced an HBCD Action Plan in August 2010. As part of this Action Plan, the U.S. EPA published a proposed Significant New Use Rule (SNUR) in 2012 that would require manufacturers, importers and processors to notify the U.S. EPA before manufacturing, importing or processing HBCD and products containing HBCD for use in covered consumer textiles, other than those used in motor vehicles. In addition, the U.S. EPA is considering a comprehensive ban as part of this Action Plan. As part of the Action Plan, the U.S. EPA also conducted a Design for the Environment (DFE) alternatives assessment of HBCD to aid users in selecting suitable alternative substances. The draft report published in September 2013 focused on EPS and XPS foam containing HBCD, and alternatives for uses in the building and construction industry. The draft report has identified possible alternatives for these uses.

#### *Other countries*

In February 2011, HBCD was included in the amended Annex XIV of the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation. As a result, HBCD is subject to the authorization procedure under REACH after August 2015. After this date, only authorized applications will be allowed. However, imported articles containing HBCD are outside the scope of the authorization procedure under REACH for HBCD and may continue to be imported after August 2015.

#### *International organizations*

HBCD was listed to Annex A (Elimination) of the Stockholm Convention on Persistent Organic Pollutants (the Stockholm Convention) in November 2013. Upon ratification of the Convention, parties will be required to prohibit the production and use of HBCD. In addition, parties may request the use of a five-year exemption provision related to HBCD use in EPS and XPS foams in buildings. HBCD is also under consideration for listing to the Protocol on Persistent Organic Pollutants to the Convention on Long-range Transboundary Air Pollution.

## 2.2 Background and context for PFOA and LC-PFCAs

PFOA and LC-PFCAs are primarily used as water, oil and grease repellants; as surfactants; and as spreading and wetting agents. The final screening assessment reports concluded that PFOA and LC-PFCAs meet the criteria under subsection 64(a) of CEPA 1999 as they are entering or may enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity.

The reports also concluded that perfluorooctanoic acid (hereafter referred to as "the substance PFOA") and its salts and long-chain perfluorocarboxylic acids (hereafter referred to as "the substances LC-PFCAs") and their salts were persistent as defined by the *Persistence and Bioaccumulation Regulations*, and based on the weight of evidence, the substances accumulate and biomagnify in terrestrial and marine mammals. As a result of the assessments, PFOA and LC-PFCAs were added to the List of Toxic Substances in Schedule 1 to CEPA 1999 in 2013.

### 2.2.1 Current uses

While PFOA and LC-PFCAs are not manufactured in Canada they were historically imported, and may continue to be imported, for use in the following manufacturing sectors: textile mills, paper and packaging, paints and coatings, inks and photo media, chemical manufacturing, electrical and electronics, cleaning products, plastic and rubber products. A study conducted for Environment Canada estimated that approximately 308 tonnes of PFOA and LC-PFCAs were imported into Canada in 2010.

### 2.2.2 Release profile

PFOA and LC-PFCAs may be found in the environment due to releases from manufacturing or processing facilities, effluent releases from wastewater treatment plants, landfill leachate, and the degradation and

transformation of precursor compounds. No data are available on the actual release of these substances to the Canadian environment.

### 2.2.3 Current Canadian risk management

In June 2006, the Government of Canada published a Notice of Action Plan for the assessment and management of PFCAs and their precursors. ([see footnote 6](#)) The Action Plan included measures to prevent the introduction of new substances into Canada that would contribute to the level of PFCAs in the environment, and to seek action from industry to address sources of PFCAs already in Canadian commerce. To this end, a voluntary *Environmental Performance Agreement Respecting Perfluorinated Carboxylic Acids (PFCAs) and their Precursors in Perfluorochemical Products Sold in Canada* (Performance Agreement) was signed on March 30, 2010. Signatories to the Performance Agreement agreed to reduce the amount of PFOA and LC-PFCAs in perfluorinated chemicals in Canadian commerce by 95% by December 31, 2010, and to eliminate them by December 31, 2015. The 2010 reduction target was met by all signatories and current estimates show that the 2015 target should also be met. The Performance Agreement was implemented as an early risk management action while Environment Canada and Health Canada pursued further assessment to guide future risk management actions.

### 2.2.4 Risk management activities in other jurisdictions

#### *United States*

The U.S. EPA announced the Long-Chain Perfluorinated Chemicals (PFCs) Action Plan in December 2009. As part of this Action Plan, the U.S. EPA published a final SNUR on September 30, 2013, that would require manufacturers, importers and processors to notify the U.S. EPA before manufacturing, importing or processing LC-PFCAs and products containing these substances for use in carpets, or for treating carpets, except for their use as a surfactant in carpet cleaning products. In addition, the U.S. EPA is considering a comprehensive ban as part of this Action Plan. Prior to establishing this Action Plan, the U.S. EPA established a Stewardship Program where industry committed to reduce global facility emissions and product content of the substance PFOA and related chemicals by 95% by 2010, and to work toward eliminating emissions and product content by 2015. These targets are the same as in the Performance Agreement mentioned above. The U.S. EPA has also conducted a new chemical review of alternatives for the substance PFOA and related chemicals to ensure that new substances are safer alternatives. To date, over 100 alternatives have been assessed. ([see footnote 7](#))

#### *Other countries*

In December 2012, the European Chemicals Agency (ECHA) identified LC-PFCAs as being very persistent and very bioaccumulative. Subsequently, the substances were added to the Candidate List of Substances of Very High Concern. ([see footnote 8](#)) Inclusion of substances on this list creates legal obligations, ([see footnote 9](#)) such as preparing notifications and reports, for companies that are manufacturing, importing or using such chemicals. In June 2013, the ECHA also concluded that the substance PFOA and one of its salts are persistent, bioaccumulative, and toxic. The substance PFOA and this salt were also added to the Candidate List. Proposals for other PFCAs are expected in the future.

#### *International organizations*

Canada is a member of the Global Perfluorinated Chemicals Group, consisting of governments, international organizations, and other stakeholders. The objectives of the Group are to consider the development, facilitation and promotion of national and international stewardship programs and regulatory approaches to reduce emissions and the content of relevant perfluorinated chemicals of concern in products and to work toward global elimination, where appropriate and technically feasible.

PFOA and LC-PFCAs are not listed on the Stockholm Convention or on the Convention on Long-Range Transboundary Air Pollution.

## 2.3 Background and context for PBDEs (including decaBDE)

PBDEs are used as a flame retardant mostly in consumer products such as electrical and electronic goods, and in transportation, textile and construction products. PBDE releases are currently managed under the *Polybrominated Diphenyl Ethers Regulations* (the PBDEs Regulations) ([see footnote 10](#)) in response to a final screening assessment report which concluded that PBDEs meet the criteria under paragraph 64(a) of CEPA 1999 as they are entering or may enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity. ([see footnote 11](#)) The report also concluded that tetraBDE, pentaBDE and hexaBDE meet the criteria for persistence and meet the criteria for bioaccumulation defined in the *Persistence and Bioaccumulation Regulations* made under CEPA 1999. PBDEs were added to the List of Toxic Substances in

Schedule 1 to CEPA 1999 in 2006.

PBDEs include tetraBDE, pentaBDE, hexaBDE, heptaBDE, octaBDE, nonaBDE, and decaBDE. These PBDEs are used in the formulation of three commercial mixtures: PentaBDE, OctaBDE and DecaBDE. ([see footnote 12](#)) The composition of PBDEs in each commercial mixture is shown in Table 3.

Table 3: Composition of PBDEs in each commercial mixture

Commercial mixtures	PBDEs						
	tetraBDE	pentaBDE	hexaBDE	heptaBDE	octaBDE	nonaBDE	decaBDE
PentaBDE	X	X	X	X	-	-	-
OctaBDE	-	X	X	X	X	X	X
DecaBDE	-	-	-	-	X	X	X

An ecological state of the science report on the bioaccumulation and transformation of decaBDE was published by Environment Canada in August 2010 based on new information that became available after the publication of the final PBDEs assessment. ([see footnote 13](#)) The report concluded that decaBDE may also contribute to the formation of bioaccumulative or potentially bioaccumulative transformation products, such as lower brominated BDEs, in organisms and in the environment. The findings of the ecological state of the science report and comments received from the public provided justification for the development of additional regulatory controls.

### 2.3.1 Current uses

PBDEs have been used in three commercial mixtures: PentaBDE, OctaBDE and DecaBDE. Historically, these have been used as flame retardants, mostly in consumer products such as furniture, televisions and computers.

A voluntary phase-out of the production of PentaBDE and OctaBDE in the United States was completed at the end of 2004. Subsequently, production of these commercial mixtures was phased-out globally.

Furthermore, the three main manufacturers of the DecaBDE commercial mixture operating in the United States voluntarily ceased exports of the DecaBDE commercial mixture to Canada in mid-2012. Currently, there are no known Canadian users or importers of the DecaBDE commercial mixture.

### 2.3.2 Release profile

Releases of PBDEs into the environment may occur during manufacture, processing, transportation, use, improper handling, improper storage or containment, and disposal.

### 2.3.3 Current Canadian risk management

The PBDEs Regulations, which were developed under CEPA 1999, came into force on June 19, 2008. The PBDEs Regulations prohibit the manufacture of all seven PBDEs. Therefore, the manufacture of the three commercial mixtures (i.e. PentaBDE, OctaBDE and DecaBDE) is prohibited. The PBDEs Regulations also prohibit the use, sale, offer for sale, or import of tetraBDE, pentaBDE and hexaBDE, as well as mixtures (i.e. PentaBDE and OctaBDE), polymers and resins containing these substances. The PBDEs Regulations do not prohibit the use, sale, offer for sale, or import of decaBDE. The proposed amendments would apply only to PBDE substances and not to products containing PBDEs. Another initiative is underway to address products containing PBDEs. In September 2013, Environment Canada published a consultation document on the proposed risk management measure for products containing PBDEs.

### 2.3.4 Risk management activities in other jurisdictions

#### *United States*

The U.S. EPA launched the PBDEs Action Plan in 2010. One component of the PBDEs Action Plan is the voluntary commitment from principal U.S. manufacturers and importers of the DecaBDE commercial mixture to initiate a reduction in the manufacture, import and sales of the DecaBDE commercial mixture starting in 2010, with all sales to cease by December 31, 2013. The U.S. EPA intends to encourage other importers of the DecaBDE commercial mixture to join this initiative. As part of the Action Plan, the U.S. EPA also conducted a DFE alternatives assessment of decaBDE to aid users in selecting suitable alternative substances. The final report released in January 2014 focused on alternatives to decaBDE in a variety of polymers and applications.

*Other countries*

The European Commission has published Regulation No. 757/2010, which prohibits the production and use of the PentaBDE and OctaBDE commercial mixtures.

*International organizations*

Components of the PentaBDE and OctaBDE commercial mixtures (i.e. tetraBDE, pentaBDE, hexaBDE and heptaBDE) were added to the Stockholm Convention and the Protocol on Persistent Organic Pollutants to the Convention on Long-range Transboundary Air Pollution in 2009. Parties ratifying these additions are required to prohibit the manufacture and use of these substances. Canada ratified these amendments to the Stockholm Convention in 2011.

## 2.4 Background and context for PFOS

PFOS is primarily used as a surfactant in fume suppressants and aqueous film-forming foam. PFOS releases are currently managed under the *Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations* (the PFOS Regulations) ([see footnote 14](#)) following the completion of the final screening assessment, which concluded that PFOS meets the criteria under paragraph 64(a) of CEPA 1999 as it is or may be entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity. ([see footnote 15](#)) The report also concluded that PFOS is persistent, and the weight of evidence is also sufficient to conclude that PFOS substances are bioaccumulative. PFOS was therefore added to the List of Toxic Substances in Schedule 1 to CEPA 1999 in 2006.

## 2.4.1 Current uses

Historically, PFOS was used in a wide variety of surface treatments for textiles, upholstery, leather, carpet and packaging to affect water, oil, soil and grease repellent properties. Potential uses of PFOS include aviation hydraulic fluids, photographic films, papers and printing plates, and photolithography applications (semi-conductor manufacturing).

## 2.4.2 Release profile

Releases of PFOS into the environment may occur during the manufacture, processing, transportation, use, improper handling, improper storage or containment and disposal of PFOS or products containing it.

## 2.4.3 Current Canadian risk management

The PFOS Regulations, which were developed under CEPA 1999, came into force on May 29, 2008. They prohibit the manufacture, use, sale, offer for sale, or import of PFOS and products containing PFOS, with a number of exemptions. These exemptions include the use of PFOS in aviation hydraulic fluids, photographic films, papers and printing plates, and photolithography applications (semi-conductor manufacturing).

## 2.4.4 Risk management activities in other jurisdictions

*United States*

The U.S. EPA has two SNURs regulating 271 PFOS-related chemicals. These SNURs require manufacturers and importers of PFOS to notify the U.S. EPA at least 90 days before the manufacture or import of these substances for any use other than certain specific, ongoing uses, which include aviation hydraulic fluids, photographic films, papers and printing plates, and certain applications in photolithography processes (semi-conductor manufacturing).

*Other countries*

The European Commission has published Regulation No. 757/2010, which prohibits the manufacture and use of PFOS with certain exemptions, including aviation hydraulic fluids, photographic films, papers and printing plates, and specific applications in photolithography processes (semi-conductor manufacturing).

In Australia, industry has initiated a voluntary phase-out action since 2000. The action is motivated by four alerts concerning PFOS published on the National Industrial Chemicals Notification and Assessment Scheme.

*International organizations*

PFOS was added to both the Stockholm Convention and the Protocol on Persistent Organic Pollutants to the Convention on Long-range Transboundary Air Pollution in 2009, with a number of exemptions. In spite of these exemptions, parties using PFOS are encouraged to phase out the substance in the exempted uses once suitable alternatives are available. In addition, the Conference of the Parties to the Stockholm Convention and the Executive Body to the Protocol on Persistent Organic Pollutants will evaluate the continued need for exemptions in 2015.

### 3. Objectives

The objectives of the proposed amendments are to

- protect the Canadian environment and provide regulatory certainty by preventing the manufacture, use, sale, offer for sale, or import of HBCD, PFOA, LC-PFCAs, PBDEs, and PFOS;
- streamline regulations under CEPA 1999 pertaining to the control of toxic substances through the update of existing regulatory controls for PBDEs and PFOS by adding these two substances to the Prohibition Regulations 2012 and repealing the regulations under which they are currently managed; and
- address administrative issues and comments received from the SJCSR on the Prohibition Regulations 2012, as well as other administrative changes.

### 4. Description

#### *HBCD*

The proposed amendments would add HBCD to section 7.1 of the Prohibition Regulations 2012, thereby prohibiting the manufacture, use, sale, offer for sale or import of the substance HBCD. EPS and XPS foams that contain HBCD and are used for building or construction applications would be prohibited after December 31, 2016.

The proposed amendments would permit the use, sale, or offer for sale of HBCD-containing EPS and XPS foams that are used for building or construction applications and that were manufactured or imported before December 31, 2016.

#### *PFOA and LC-PFCAs*

The proposed amendments would add PFOA and LC-PFCAs to Schedule 2 of the Prohibition Regulations 2012, thereby prohibiting the manufacture, use, sale, offer for sale, or import of PFOA and LC-PFCAs and products containing these substances, unless they are present in manufactured items.

A temporary exemption period would allow the manufacture, use, sale, offer for sale, or import of water-based inks and photo media coatings containing these substances until December 31, 2016. The proposed amendments would also allow the ongoing use of aqueous film-forming foams containing these substances used in firefighting applications.

The proposed amendments would permit the use, sale, or offer for sale of PFOA and LC-PFCAs and products containing these substances that were either manufactured or imported before the coming into force of the proposed amendments or the end of the temporary exemption period, as applicable. The proposed amendments would allow the use, sale, offer for sale, or import of PFOA and LC-PFCAs and products containing these substances if intended for personal use.

#### *PBDEs (including decaBDE)*

The proposed amendments would add PBDEs to Schedule 1 of the Prohibition Regulations 2012. The proposed amendments would maintain similar regulatory requirements as specified under the PBDEs Regulations. In addition, the proposed amendments would prohibit the use, sale, offer for sale, or import of decaBDE. As a result, the manufacture, use, sale, offer for sale or import of the DecaBDE commercial mixture would be prohibited. The proposed amendments would also repeal the PBDEs Regulations since there would no longer be a need for separate regulations for these substances.

#### *PFOS*

The proposed amendments would add PFOS to Schedule 2 of the Prohibition Regulations 2012 and maintain similar regulatory requirements, as specified under the PFOS Regulations, except the following proposed amendments:



- removal of the current exemption for the use, sale, offer for sale, or import of aviation hydraulic fluids containing PFOS;
- removal of the current exemption for aqueous film-forming foams containing PFOS used in a military vessel deployed before May 2013 for a military operation; and
- modification of the permitted concentration limit for the use of PFOS in aqueous film-forming foams by increasing the limit from 0.5 ppm to 10 ppm.

The removal and modification of current exemptions are based on consultations with stakeholders, which have indicated that the activities associated with the two exemptions no longer occur, and the concentration limit needs to be updated in light of this new information.

The PFOS Regulations would be repealed; however, the proposed amendments would include provisions to ensure that the record-keeping requirements of the PFOS Regulations would continue to apply.

#### *Laboratory use*

The proposed amendments would allow the use of HBCD, PFOA, LC-PFCAs, PBDEs, and PFOS in a laboratory for analysis, in scientific research or as a laboratory analytical standard. Intended laboratory use of these substances would require annual reporting in respect of each substance.

#### *Administrative changes*

The proposed amendments include administrative changes to the Prohibition Regulations 2012 regarding the accredited laboratory and record-keeping provisions by updating references in section 13 to include laboratories that are accredited under Quebec's *Environment Quality Act* (C.Q.L.R., c. Q-2), and by adding a new subsection 15(3) that would require regulatees to notify the Minister if records are moved.

The proposed amendments also include administrative changes recommended by the SJCSR to improve the clarity and consistency of the regulatory text. These include minor editorial changes to subsection 3(2) and subsection 10(3) and the addition of a new subsection 10(4).

### **5. "One-for-One" Rule**

The "One-for-One" Rule would apply to the proposed amendments, as there would be incremental administrative costs ("INs") to business. The 10 laboratories that use these substances above the 10 g threshold would bear administrative costs. The cost estimates are considered reasonable based on the nature and complexity of the administrative requirements. The 10 laboratories would need to learn about the administrative requirements (one hour) and would be required to submit annual reports and keep these reports for record-keeping purposes (four hours). Following Treasury Board Secretariat's guidance on standard costing and using a 7% discount rate and 2012 dollars, it is estimated that the total annualized administrative costs over a 10-year time frame is approximately \$1,200 for all stakeholders (or \$120 per stakeholder).

The repeal of the PFOS Regulations and the PBDEs Regulations would also result in an "OUT" of two titles under the Rule, and it is not expected to have any impact on the administrative burden of the regulated community as the proposed amendments would maintain the same administrative requirements. The removal of certain exemptions for PFOS would not affect the administrative burden on regulatees as the associated activities no longer occur.

### **6. Small business lens**

The small business lens would not apply to the proposed amendments since the cost impact of the proposed amendments would be below \$1,000,000 annually, and the cost impact per small business would be negligible and is not considered disproportionate.

The 10 laboratories mentioned above in the "One-for-One" Rule" section are considered small businesses as the number of employees per laboratory is below 100. All small businesses are expected to learn about the administrative requirements and would be required to submit annual reports. Since the cost per small business is expected to be minimal, as discussed above, and since the reporting cost on laboratories is not disproportionate, the small business lens would not be triggered.

### **7. Consultation**

*HBCD*



In October 2012, Environment Canada published a consultation document regarding the addition of HBCD to the Prohibition Regulations 2012, with a 60-day public comment period to solicit comments. ([see footnote 16](#)) Stakeholders were generally supportive of the proposed amendments. The proposed temporary permitted use of EPS and XPS foams that contain HBCD and are used for building or construction applications is expected to allow stakeholders adequate time to phase out HBCD use and transition to alternatives while still managing potential environmental risks.

Through consultations, the automotive sector provided information on the progress it has made to phase out HBCD. This sector now represents less than 1% of HBCD use in Canada and the substance is being phased out globally in automotive applications. The risk management measures included in the consultation document proposed a time-limited regulatory exemption on the use of HBCD within the automotive sector. The sector expressed concern regarding its ability to fully phase out HBCD in the near-term due to the complexity of its operations. Environment Canada has acknowledged these concerns and will address the use of HBCD in the automotive sector through non-regulatory measures to work towards achieving a full phase-out. This approach allows the sector the flexibility required to support its competitiveness in an integrated North American automotive manufacturing industry. Therefore, the use of HBCD within the automotive sector would not be included within the proposed amendments.

#### *PFOA and LC-PFCAs*

In January 2014, Environment Canada published a consultation document regarding the addition of PFOA and LC-PFCAs to the Prohibition Regulations 2012, with a 30-day public comment period to solicit comments. ([see footnote 17](#)) In general, stakeholders were supportive of the proposed addition. Moreover, the majority of international manufacturers and domestic importers have indicated that they expect to have completed the phase-out of these substances before the coming into force of the proposed amendments. For certain uses, stakeholders provided evidence that the transition to alternative substances will require additional time, and this has been accommodated in the temporary exemptions and permitted uses discussed in section 4.

In the case of the automotive sector, PFOA and LC-PFCA substances may be present in vehicle parts. Consequently, stakeholders from this sector indicated that they were supportive of the proposed exclusion of manufactured items from the prohibition. The sector also noted that it does not use these substances in domestic manufacturing operations, as pure chemicals or in mixtures, but highlighted the constraints on data for products used within the sector to confirm this definitively. However, the FluoroCouncil members who manufacture PFOA and LC-PFCAs and sell to producers of paints, sealants, coatings, etc., have indicated that they will have transitioned to alternatives prior to the coming into force of the amendments. Thus, the automotive supply chain is no longer expected to have products containing these substances. Given the exclusion of manufactured items, and the global phase out of PFOA and LC-PFCAs, impacts to the automotive sector are not expected as a result of the addition of these substances to the Prohibition Regulations 2012.

#### *PBDEs (including decaBDE)*

In February 2013, Environment Canada published a consultation document regarding the proposal to align substance-based controls for all PBDEs assessed under CEPA 1999, with a 60-day public comment period to solicit comments. ([see footnote 18](#)) In general, the regulated community was supportive of the proposed addition. Moreover, primary industries indicated that they have already phased out the use of the DecaBDE commercial mixture in their operations, and are now working with the suppliers to phase out materials containing the DecaBDE commercial mixture in parts and products.

#### *PFOS*

In January 2013, Environment Canada published a consultation document with a 60-day public comment period to solicit comments on removing the ongoing exemptions under the PFOS Regulations. ([see footnote 19](#)) Comments received indicated that two of these exemptions could be removed as the associated activities no longer occur, and one exemption should be modified taking into consideration new information. In response, the proposed amendments would remove these two exemptions and modify the other exemption.

### **8. Rationale**

The screening assessments concluded that HBCD, PFOA, LC-PFCAs, PBDEs and PFOS meet the criteria under subsection 64(a) of the CEPA 1999, as they each are entering or may enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity. Moreover, HBCD is bioaccumulative and persistent, and has demonstrated ecotoxicity in both aquatic and terrestrial species. The substance PFOA and its salts, and the substances LC-PFCAs and their salts were found to be persistent and to accumulate and biomagnify in terrestrial and marine mammals.

The proposed amendments controlling HBCD, PFOAs, LC-PFCAs, decaBDE, and PFOS are therefore the most appropriate course of action to respond to the risks to the environment posed by these substances.

The proposed amendments would add PBDEs and PFOS to the Prohibition Regulations 2012, and repeal the PBDEs Regulations and the PFOS Regulations to provide added consistency in how these toxic substances are controlled under CEPA 1999. Two current exemptions under the PFOS Regulations would be removed, as associated activities no longer occur, and one exemption would be modified taking into consideration new information. Stakeholders have been consulted and have showed support for the proposed amendments.

The proposed amendments would allow for the use of HBCD, PFOA, LC-PFCAs, PBDEs, and PFOS for analysis, in scientific research or as a laboratory analytical standard. Use of these substances is expected to be minimal and presents a negligible risk.

## 9. Summary of impacts

The proposed amendments would protect the environment by prohibiting the manufacture, use, sale, offer for sale or import of HBCD, PFOA, LC-PFCAs, PBDEs and PFOS. An improvement in environmental quality is expected from controlling these substances.

The proposed amendments would also impose costs on industry stakeholders and the federal government. With a 3% discount rate and a 10-year study period (from 2014 to 2023), it is estimated that industry and the federal government would bear total costs over 10 years of approximately \$1.5 million in present value (2012 Canadian dollars) due to industry administrative activities (\$13,000), industry compliance with the HBCD regulatory requirements (\$1.1 million), and government enforcement and compliance promotion activities (\$0.4 million) associated with the proposed amendments.

### 9.1 Impacts on industry and the environment

#### *HBCD*

The substance HBCD has demonstrated ecotoxicity in both aquatic and terrestrial species. While most HBCD will be sequestered in landfills, a certain amount of the substance can be released into the environment during the manufacture and use of products containing HBCD. However, HBCD releases are dispersed because they occur during the service life of EPS and XPS foam products that are widespread in Canada. The proposed amendments would thus protect the Canadian environment by controlling HBCD.

Moreover, an alternative substance to HBCD is now commercially available and has been demonstrated to be as effective as HBCD but less environmentally harmful. While it is challenging to accurately estimate the environmental benefits resulting from the proposed amendments, given that no monitoring data is currently available, it is expected that the proposed amendments would result in an improvement in environmental quality by contributing to the reduction of HBCD releases.

The proposed amendments would thus replace HBCD with an alternative substance and impose minimal costs on manufacturers. Ongoing consultations and the study (see footnote 5) have confirmed that most manufacturers of XPS foam and EPS resin have already begun the evaluation process and transition to an alternative to HBCD, and are expected to phase out HBCD in most applications by 2015, before the proposed exemption would expire on December 31, 2016. Therefore, very few manufacturers would be affected by the proposed amendments. Based on the study, it is estimated that the costs of compliance per stakeholder over 10 years would be approximately \$1.1 million in present value (or \$133,000 annually), since the alternative would be more expensive per kilogram and more of it would be required to achieve the same performance, new equipment would need to be purchased for production, and new products would need to be tested with the alternative.

In order to be aligned with global risk management measures under the Stockholm Convention, the proposed amendments would allow a temporary exemption for EPS and XPS foam applications. The proposed Regulations prohibiting HBCD differ from the proposed SNUR in the United States; however, the U.S. EPA has identified HBCD for a full risk assessment.

#### *PFOA and LC-PFCAs*

The scientific evidence has demonstrated that the substance PFOA and its salts and the substances LC-PFCAs and their salts are persistent and that they accumulate and biomagnify in terrestrial and marine animals. The ongoing release of PFOA and LC-PFCAs may result in harm to the Canadian environment.

The proposed amendments would protect the Canadian environment by preventing the reintroduction of PFOA and LC-PFCAs as industry is already working towards phasing out these substances. The proposed

amendments would also provide regulatory certainty to ensure full industry coverage even after the voluntary performance agreement on these substances comes to an end on December 31, 2015.

The proposed amendments are expected to have a low cost impact on industry. The substances are not currently manufactured in Canada and are only known to be imported. Furthermore, industry sectors have already completed the transition to alternatives, or are expected to do so prior to the coming into force of the proposed amendments. Development of alternatives of PFOA and LC-PFCAs in water-based inks and photo media coatings is underway, and companies expect to eliminate their use of these substances by the end of 2016, when the temporary exemption would expire. For the use of aqueous film-forming foams containing PFOA and LC-PFCAs used in fire-fighting applications, there are currently no known alternatives and the exemption would allow its ongoing use.

#### *PBDEs (including decaBDE)*

In addition to maintaining the existing prohibitions in the PBDEs Regulations, the proposed amendments would prohibit the use, sale, offer for sale, or import of decaBDE. As a result, the use, sale, offer for sale, or import of the DecaBDE commercial mixture would be prohibited. The cost impact on industry is expected to be minimal, as currently there are no known importers of the DecaBDE commercial mixture in Canada.

The three main manufacturers of the DecaBDE commercial mixture operating in the United States made a commitment to the U.S. EPA to cease production and sales by the end of 2013 to comply with the SNUR. Therefore, the prohibition of all seven PBDEs in Canada should not result in a restriction on trade with the United States.

#### *PFOS*

The proposed amendments would maintain the same regulatory requirements as those specified under the PFOS Regulations with the exception of two exemptions that would be removed, as associated activities no longer occur, and one exemption that would be modified to take into consideration new information. Therefore, the proposed amendments would protect the Canadian environment by preventing the potential reintroduction of PFOS from these uses. The overall cost impact on industry is expected to be negligible, since PFOS has been controlled.

While activities associated with PFOS are prohibited with some exemptions in Canada, recent consultation with stakeholders has demonstrated that this exemption is no longer required in Canada as the manufacturers have moved to different formulations. Therefore, this exemption can be removed without negatively impacting Canadian stakeholders.

### 9.2 Impacts on the Government of Canada

The federal government would incur total costs over 10 years of approximately \$383,000 in present value. These costs would be incurred for compliance promotion (\$88,000) and enforcement of the provisions of the proposed amendments (\$295,000).

#### *Compliance promotion*

Compliance promotion activities are intended to encourage the regulated community to achieve compliance. Compliance promotion costs include distributing the final regulations, developing and distributing promotional materials (such as a fact sheet and Web material), and attending association conferences. This cost over 10 years is about \$88,000 in present value.

#### *Enforcement*

Government of Canada enforcement activities are intended to ensure compliance with the proposed amendments. The present value of enforcement costs for 10 years is about \$295,000, which includes inspections, investigations, measures to deal with alleged violations and prosecutions.

### 9.3 Other impacts

The proposed amendments would make minor administrative changes to the Prohibition Regulations 2012, including updating the accredited laboratories references in the regulatory text, adding a deadline for the notification of a change of civic address, and improving the clarity and consistency of the regulatory text between the English and the French versions, which would benefit the Government and stakeholders. The proposed amendments would also consolidate regulations that pertain to the control of toxic substances. This would benefit industry and Government by standardizing requirements and creating common expectations with regard to chemical management.

The proposed amendments would also impose an administrative burden on industry, as stakeholders would need to learn about the administrative requirements. Furthermore, 10 laboratories that use these substances in quantities above 10 g would be required to submit an annual report. The total administrative costs for 10 years are estimated to be approximately \$13,000 in present value (or \$1,500 annually).

## 10. Implementation, enforcement and service standards

### *Implementation*

The proposed amendments would come into force three months after they are registered. The compliance promotion approach for the proposed amendments would be similar to that taken for the Prohibition Regulations 2012, which includes maintaining a database of stakeholders, maintaining a page on the CEPA Environmental Registry Web site for the Prohibition Regulations 2012, and responding to inquiries from stakeholders. In addition, promotional material (such as fact sheets and Web materials) is under development and may be distributed. Environment Canada would undertake outreach activities to raise potential industry stakeholder awareness of the prohibition and associated requirements.

The coordination and implementation of compliance promotion activities would be completed through the Prohibition of Certain Toxic Substances Regulations Working Group, which is composed of Environment Canada officials from headquarters and regional offices. Environment Canada would consider opportunities for compliance promotion coordination with respect to other CEPA 1999 regulations that may have similar regulated activities or parties or compliance promotion approaches.

### *Enforcement*

As the proposed amendments would be promulgated under CEPA 1999, enforcement officers would, when verifying compliance with the proposed amendments, apply the Compliance and Enforcement Policy implemented under CEPA 1999. The Compliance and Enforcement Policy also sets out the range of possible responses to alleged violations, including warnings, directions, environmental protection compliance orders, ticketing, ministerial orders, injunctions, prosecution, and environmental protection alternative measures (which are an alternative to a court trial after the laying of charges for a violation under CEPA 1999). In addition, the Policy explains when Environment Canada will resort to civil suits by the Crown for cost recovery. When, following an inspection or an investigation, an enforcement officer discovers an alleged violation, the officer will choose the appropriate enforcement action based on the Policy.

A copy of the Policy may be obtained from the following Web site: <http://www.ec.gc.ca/LCPE-CEPA/default.asp?lang=en&n5082BFBE-1>.

### *Service standards*

The proposed amendments include provisions for regulatees to request permits from the Minister of the Environment. The applications for permits would be reviewed by Environment Canada. The administrative procedure may take up to 60 working days. Environment Canada would make every effort to respond quickly to permit applications.

## 11. Contacts

Vincenza Galatone  
Executive Director  
Chemicals Management Division  
Environment Canada  
Gatineau, Quebec  
K1A 0H3  
Telephone: 819-938-4320  
Fax: 819-938-4300  
Email: GR-RM@ec.gc.ca

Yves Bourassa  
Director  
Regulatory Analysis and Valuation Division  
Environment Canada  
Gatineau, Quebec  
K1A 0H3  
Telephone: 819-953-7651  
Fax: 819-953-3241  
Email: RAVD.DARV@ec.gc.ca

## PROPOSED REGULATORY TEXT

Notice is given, pursuant to subsection 332(1) ([see footnote a](#)) of the *Canadian Environmental Protection Act, 1999* ([see footnote b](#)), that the Governor in Council proposes, pursuant to subsection 93(1) of that Act, to make the annexed *Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2012*.

Any person may, within 75 days after the date of publication of this notice, file with the Minister of the Environment comments with respect to the proposed Regulations or, within 60 days after the date of publication of this notice, file with that Minister a notice of objection requesting that a board of review be established under section 333 of that Act and stating the reasons for the objection. All comments and notices must cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent to Vincenza Galatone, Executive Director, Chemicals Management Division, Environment Canada, Gatineau, Quebec K1A 0H3 (tel.: 819-938-4320; fax: 819-938-4300; email: GR-RM@ec.gc.ca).

A person who provides information to the Minister may submit with the information a request for confidentiality under section 313 of that Act.

Ottawa, March 26, 2015

JURICA ČAPKUN  
*Assistant Clerk of the Privy Council*

## REGULATIONS AMENDING THE PROHIBITION OF CERTAIN TOXIC SUBSTANCES REGULATIONS, 2012

### AMENDMENTS

**1. Section 1 of the *Prohibition of Certain Toxic Substances Regulations, 2012* ([see footnote 20](#)) is replaced by the following:**

Application

1. Subject to sections 2 and 3, these Regulations apply to toxic substances that are both specified in the List of Toxic Substances in Schedule 1 to the *Canadian Environmental Protection Act, 1999* and referred to in section 7.1 or set out in Schedule 1 or 2 to these Regulations.

**2. Paragraph 2(c) of the Regulations is replaced by the following:**

(c) is present as a contaminant in a chemical feedstock that is used in a process from which there are no releases of the toxic substance and on the condition that the toxic substance is destroyed or completely converted in that process to a substance that is not a toxic substance referred to in section 7.1 or set out in Schedule 1 or 2.

**3. Subsections 3(2) to (4) of the Regulations are replaced by the following:**

Information to Minister — more than 10 g

(2) Every person must submit to the Minister in any calendar year the information set out in Schedule 3 for each toxic substance or a product containing it that they intend to use for a purpose referred to in subsection (1) as soon as feasible before the use of more than 10 g of the substance, by itself or in a product, in that calendar year. The information must be submitted only once in a calendar year in respect of each substance or product.

Substance — Schedule 2.1

(3) Any person that is using a toxic substance set out in column 1 of Schedule 2.1 or a product containing it on the day set out in column 2 in respect of that substance, for a purpose referred to in subsection (1), must, if the quantity of the toxic substance used, by itself or in a product, exceeded 10 g in the calendar year in which that day occurs, submit to the Minister, within 60 days after that day, the information referred to in Schedule 3. The information must be submitted only once in a calendar year in respect of each substance or product.

**4. Section 5 of the Regulations is replaced by the following:**

Exception — manufactured or imported before March 14, 2013

5. A person may use, sell, or offer for sale a product containing a toxic substance set out in item 11 or 12 of Part 1 of Schedule 1 if the product is manufactured or imported before March 14, 2013.

**5. (1) Subsection 6(1) of the Regulations is replaced by the following:**

Toxic substance — Schedule 2

6. (1) Subject to subsections (2) to (2.4) and sections 7 and 9, a person must not manufacture, use, sell, offer for sale or import a toxic substance set out in column 1 of Part 1, 1.1, 1.2, 2 or 3 of Schedule 2 or a product containing it unless the toxic substance is incidentally present.

**(2) Paragraph 6(2)(a) of the Regulations is replaced by the following:**

(a) the toxic substance set out in column 1 of Part 1 of Schedule 2 or the product containing it is designed for a use set out in column 2 in respect of that substance;

**(3) Paragraph 6(2)(c) of the English version of the Regulations is replaced by the following:**

(c) a product set out in column 2 of Part 3 of Schedule 2 contains the toxic substance set out in column 1 in a concentration less than or equal to that set out in column 3, including any incidental presence of the substance.

**(4) Section 6 of the Regulations is amended by adding the following after subsection (2):**

Permitted use and import — Part 1.1 of Schedule 2

(2.1) The prohibition to use or import a product containing a toxic substance set out in column 1 of item 1 of Part 1.1 of Schedule 2 does not apply to a product set out in column 2 that contains that substance.

Permitted use, sale, offer for sale and import — Part 1.1 of Schedule 2

(2.2) The prohibition to use, sell, offer for sale or import a product containing a toxic substance set out in column 1 of any of items 2 to 5 of Part 1.1 of Schedule 2 does not apply to a product set out in column 2 that contains that substance.

Permitted use — Part 1.2 of Schedule 2

(2.3) The prohibition to use a product containing a toxic substance set out in column 1 of Part 1.2 of Schedule 2 does not apply to a product set out in column 2 that contains that substance.

Non-application — manufactured items

(2.4) The prohibition to use, sell, offer for sale or import a product containing a toxic substance set out in column 1 of any of items 2 to 5 of Part 2 of Schedule 2 does not apply to a product that is a manufactured item that is formed into a specific physical shape or design during its manufacture and that has, for its final use, a function or functions dependent in whole or in part on its shape or design.

**(5) Subsection 6(4) of the Regulations is repealed.**

**(6) Subsection 6(5) of the Regulations is replaced by the following:**

Exception — personal use

(5) Subsection (1) does not apply to the use or import of a product containing a toxic substance set out in Part 2 of Schedule 2 if the product is used or intended to be used for a personal use.

**6. Subsection 7(2) of the Regulations is replaced by the following:**

Exception — products

(2) A person may use, sell, or offer for sale a product containing a toxic substance that is

- (a) set out in any of items 2 to 5 of Part 2 of Schedule 2, if the product was manufactured or imported before the coming into force of these Regulations; or
- (b) set out in item 2 of Part 3 of Schedule 2, if the product was manufactured or imported before March 14, 2013.

Exception — manufactured items

(3) A person may use, sell, or offer for sale a product that was manufactured or imported before May 29, 2008 containing the toxic substance set out in item 3 of Part 3 of Schedule 2 if the product is a manufactured item that was formed into a specific physical shape or design during its manufacture and that has, for its final use, a function or functions dependent in whole or in part on its shape or design.

**7. The Regulations are amended by adding the following after section 7:**

Hexabromocyclododecane

**7.1** (1) Subject to subsection (2), a person must not manufacture, use, sell, offer for sale or import Hexabromocyclododecane, unless it is incidentally present.

Permitted activities

(2) The prohibition to use, sell, offer for sale or import Hexabromocyclododecane does not apply, on or before December 31, 2016, to the manufacture, use, sale or offer for sale of the following products:

- (a) expanded polystyrene foam; and
- (b) extruded polystyrene foam.

Prohibited products

(3) Except as set out in subsection (4), a person must not, on or after January 1, 2017, manufacture, use, sell, offer for sale or import — for a building or construction application — any product referred to in paragraph (2)(a) or (b) containing Hexabromocyclododecane.

Exception

(4) A person may use, sell or offer for sale — for a building or construction application — any product referred to in paragraph (2)(a) or (b) if the product was manufactured or imported on or before December 31, 2016.

**8. Subsections 9(1) to (3) of the Regulations are replaced by the following:**

Requirement for permit

**9.** (1) Any person that is a manufacturer or importer of a toxic substance or a product containing it that is prohibited under section 4 or 6 on March 14, 2013 may continue to manufacture or import the substance or product if they have been issued a permit under section 10.

Addition of substance

(2) In the case of a toxic substance that, after March 14, 2013, is either added to Schedule 1 and prohibited under section 4, or added to Schedule 2 and prohibited under section 6, but excluding a substance referred to in paragraph 6(2)(b), any person that is a manufacturer or importer of the toxic substance or a product containing it on the date set out in column 2 of Schedule 2.1 in respect of that substance may continue to manufacture or import the substance or a product containing it if they have been issued a permit under section 10.

Temporary permitted uses

(3) Any person that, under paragraph 6(2)(b), manufactures or imports a toxic substance that is set out in any of items 1 to 5 of Part 2 of Schedule 2 or a product containing it on the expiry date set out in column 3 in respect of that substance may continue that activity if they have been issued a permit under section 10.

**9. Subsection 10(3) of the Regulations is replaced by the following:**



Expiry and permit renewal

(3) A permit expires 12 months after the day on which it is issued unless, at least 30 days before the day on which the permit expires, the applicant submits an application for renewal to the Minister that contains the information referred to in Schedule 4.

Limitations on renewal

(4) A permit may only be renewed twice and subsections (1) and (2) apply to any renewal.

**10. Section 13 of the Regulations is replaced by the following:**

Accredited laboratory

**13.** Any determination of concentration or quantity under these Regulations must be conducted by a laboratory that

- (a) is accredited under the International Organization for Standardization standard ISO/IEC 17025:2005, entitled *General requirements for the competence of testing and calibration laboratories*, as amended from time to time;
- (b) meets a standard equivalent to the standard referred to in paragraph (a); or
- (c) is accredited in accordance with the Quebec *Environment Quality Act*, CQLR c. Q-2, as amended from time to time.

**11. Section 15 of the Regulations is amended by adding the following after subsection (2):**

Records moved

(3) If the records are moved, the person must notify the Minister, in writing, of the civic address of the new location within 30 days after the day of the move.

**12. Part 2 of Schedule 1 to the Regulations is amended by adding the following after item 4:**

Item	Toxic Substance
5.	Polybrominated diphenyl ethers that have the molecular formula $C_{12}H_{(10-n)}Br_nO$ in which $4 \leq n \leq 10$

**13. Parts 1 and 2 of Schedule 2 to the Regulations are replaced by the following:**

PART 1

PERMITTED USES — ALL ACTIVITIES

Item	Column 1 Toxic Substance	Column 2 Permitted Uses
1.	Benzidine and benzidine dihydrochloride, which have the molecular formulae $C_{12}H_{12}N_2$ and $C_{12}H_{12}N_2 \cdot 2HCl$ , respectively	(a) Staining for microscopic examination, such as immunoperoxidase staining, histochemical staining or cytochemical staining; (b) Reagent for detecting blood in biological fluids; (c) Niacin test to detect certain micro-organisms; and (d) Reagent for detecting chloralhydrate in biological fluids.
2.	2-Methoxyethanol, which has the molecular formula $C_3H_8O_2$	(a) Adhesives and coatings for aircraft refinishing; and (b) Semiconductor manufacturing process.
3.	Benzenamine, <i>N</i> -phenyl-, reaction	Additive in rubber, except in tires

4.	products with styrene and 2,4,4-trimethylpentene Perfluorooctane sulfonate and its salts and compounds that contain one of the following groups: $C_8F_{17}SO_2$ , $C_8F_{17}SO_3$ or $C_8F_{17}SO_2N$	(a) Photoresists or anti-reflective coatings for photolithography processes; and (b) Photographic films, papers and printing plates.
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PART 1.1

PERMITTED USES — CERTAIN ACTIVITIES

Item	Column 1 Toxic Substance	Column 2 Permitted Uses
1.	Perfluorooctane sulfonate and its salts and compounds that contain one of the following groups: $C_8F_{17}SO_2$ , $C_8F_{17}SO_3$ or $C_8F_{17}SO_2N$	In aqueous film forming foam present in a military vessel or military fire-fighting vehicle contaminated during a foreign military operation ( <a href="#">see note 1</a> )
2.	Perfluorooctanoic acid, which has the molecular formula $C_7F_{15}CO_2H$ , and its salts	In aqueous film forming foam used in fire-fighting applications
3.	Compounds that consist of a perfluorinated alkyl group that has the molecular formula $C_nF_{2n+1}$ in which $n = 7$ or $8$ and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom	In aqueous film forming foam used in fire-fighting applications
4.	Perfluorocarboxylic acids that have the molecular formula $C_nF_{2n+1}CO_2H$ in which $8 \leq n \leq 20$ , and their salts	In aqueous film forming foam used in fire-fighting applications
5.	Compounds that consist of a perfluorinated alkyl group that has the molecular formula $C_nF_{2n+1}$ in which $8 \leq n \leq 20$ and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom	In aqueous film forming foam used in fire-fighting applications

[Note 1](#)

“Military operation” means any operation taken to protect national security, support humanitarian relief efforts, participate in multilateral military or peace-keeping activities under the auspices of international organizations or defend a member state of the North Atlantic Treaty Organization.

PART 1.2

PERMITTED USES — USE ONLY

Item	Column 1 Toxic Substance	Column 2 Permitted Uses
1.	Pentachlorobenzene, which has the molecular formula $C_6HCl_5$	Use with chlorobiphenyls contained in equipment or liquids in the service of such equipment in which their use is permitted under the <i>PCB Regulations</i>
2.	Tetrachlorobenzenes, which have the molecular formula $C_6H_2Cl_4$	Use with chlorobiphenyls contained in equipment or liquids in the service of such equipment in which their use is permitted under the <i>PCB Regulations</i>

PART 2

TEMPORARY PERMITTED USES

Item	Column 1 Toxic Substance	Column 2 Permitted Uses	Column 3 Expiry Date
1.	Benzenamine, <i>N</i> -phenyl-, reaction products with styrene and 2,4,4-trimethylpentene	Additive in lubricants	March 14, 2015
2.	Perfluorooctanoic acid, which has the molecular	Water-based	December

	formula $C_7F_{15}CO_2H$ , and its salts	inks and photo media coatings	31, 2016
3.	Compounds that consist of a perfluorinated alkyl group that has the molecular formula $C_nF_{2n+1}$ in which $n = 7$ or $8$ and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom	Water-based inks and photo media coatings	December 31, 2016
4.	Perfluorocarboxylic acids that have the molecular formula $C_nF_{2n+1}CO_2H$ in which $8 \leq n \leq 20$ , and their salts	Water-based inks and photo media coatings	December 31, 2016
5.	Compounds that consist of a perfluorinated alkyl group that has the molecular formula $C_nF_{2n+1}$ in which $8 \leq n \leq 20$ and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom	Water-based inks and photo media coatings	December 31, 2016

**14. Part 3 of Schedule 2 to the Regulations is amended by adding the following after item 2:**

	Column 1	Column 2	Column 3
Item	Toxic Substance	Product Containing the Toxic Substance	Concentration Limit of the Toxic Substance
3.	Perfluorooctane sulfonate and its salts and compounds that contain one of the following groups: $C_8F_{17}SO_2$ , $C_8F_{17}SO_3$ or $C_8F_{17}SO_2N$	Aqueous Film Forming Foam	10 ppm

**15. The Regulations are amended by adding, after Schedule 2, the Schedule 2.1 set out in the schedule to these Regulations.**

**16. The references after the heading "SCHEDULE 3" in Schedule 3 to the Regulations are replaced by the following:**

*(Subsections 3(2) and (3))*

**TRANSITIONAL PROVISION**

**17. Section 11 of the *Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations*, as it read immediately before the day on which these Regulations come into force, continues to apply until March 31, 2019 to any person to whom section 9 of those Regulations applies.**

**REPEALS**

**18. The *Polybrominated Diphenyl Ethers Regulations* ([see footnote 21](#)) are repealed.**

**19. The *Perfluorooctane Sulfonate and its Salts and Certain Other Compounds Regulations* ([see footnote 22](#)) are repealed.**

**COMING INTO FORCE**

**20. These Regulations come into force on the day that is three months after the day on which they are registered.**

**SCHEDULE  
(Section 15)**

**SCHEDULE 2.1  
(Subsections 3(3) and 9(2))**

**ADDED TOXIC SUBSTANCES**

Item	Column 1 Toxic Substance	Column 2 Date Substance Added
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1.	Polybrominated diphenyl ethers that have the molecular formula $C_{12}H_{(10-n)}Br_nO$ in which $4 \leq n \leq 10$	Coming into force of these Regulations
2.	Perfluorooctane sulfonate and its salts and compounds that contain one of the following groups: $C_8F_{17}SO_2$ , $C_8F_{17}SO_3$ or $C_8F_{17}SO_2N$	Coming into force of these Regulations
3.	Hexabromocyclododecane	Coming into force of these Regulations
4.	Perfluorooctanoic acid, which has the molecular formula $C_7F_{15}CO_2H$ , and its salts	Coming into force of these Regulations
5.	Compounds that consist of a perfluorinated alkyl group that has the molecular formula $C_nF_{2n+1}$ in which $n = 7$ or $8$ and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom	Coming into force of these Regulations
6.	Perfluorocarboxylic acids that have the molecular formula $C_nF_{2n+1}CO_2H$ in which $8 \leq n \leq 20$ , and their salts	Coming into force of these Regulations
7.	Compounds that consist of a perfluorinated alkyl group that has the molecular formula $C_nF_{2n+1}$ in which $8 \leq n \leq 20$ and that is directly bonded to any chemical moiety other than a fluorine, chlorine or bromine atom	Coming into force of these Regulations

[14-1-o]

**Footnote 1**

Unless stated elsewhere, the abbreviation PFOS will be used to collectively refer to perfluorooctane sulfonate, its salts and compounds that contain one of the following groups:  $C_8F_{17}SO_2$ ,  $C_8F_{17}SO_3$  or  $C_8F_{17}SO_2N$ .

**Footnote 2**

The screening assessments can be found at <http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=0DA2924D-1&wsdoc=4ABEFFC8-5BEC-B57A-F4BF-11069545E434>.

**Footnote 3**

The Prohibition Regulations 2012 can be found at <http://www.gazette.gc.ca/rp-pr/p2/2013/2013-01-02/html/sor-dors285-eng.html>.

**Footnote 4**

The assessment can be found at <http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=7882C148-1>.

**Footnote 5**

Cheminfo Services, Inc., *Update on the Use of Hexabromocyclododecane in Canada and Emerging Substitutes to Its Use*, March 2013.

**Footnote 6**

In this instance, PFCAs refer to perfluorocarboxylic acids and include short-chain PFCAs, perfluorooctanoic acid, and long-chain PFCAs. This definition does not include associated salts or precursors.

**Footnote 7**

This review can be found at <http://www.epa.gov/oppt/pfoa/pubs/altnewchems.html>.

**Footnote 8**

The Candidates List of Substances can be found at <http://echa.europa.eu/web/guest/regulations/reach/authorisation/the-candidate-list>.

**Footnote 9**

A summary of these obligations can be found at <https://echa.europa.eu/candidate-list-obligations>.

**Footnote 10**

The Regulations can be found at <http://www.gazette.gc.ca/rp-pr/p2/2008/2008-07-09/html/sor-dors218-eng.html>.

**Footnote 11**

The assessment can be found at <http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=0DDA2F24-1>.

**Footnote 12**

Note that decaBDE refers to the congener and DecaBDE refers to the commercial mixture.

**Footnote 13**

The report can be found at <http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=B901A9EB>.

**Footnote 14**

The Regulations can be found at <http://www.gazette.gc.ca/rp-pr/p2/2008/2008-06-11/html/sor-dors178-eng.html>.

**Footnote 15**

The assessment can be found at <http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=98B1954A-1&offset=3&toc=show>.

[Footnote 16](#)

The consultation document can be found at <http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=6668F8BC-1>.

[Footnote 17](#)

The consultation document can be found at <http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=2A11BA77-1>.

[Footnote 18](#)

The consultation document can be found at <http://www.ec.gc.ca/ese-ees/default.asp?lang=En&n=92B7DD05-1>.

[Footnote 19](#)

The consultation document can be found at <http://www.ec.gc.ca/toxiques-toxics/default.asp?lang=En&n=96A225B1-1>.

[Footnote 20](#)

SOR/2012-285

[Footnote 21](#)

SOR/2008-218

[Footnote 22](#)

SOR/2008-178

[Footnote a](#)

S.C. 2004, c. 15, s. 31

[Footnote b](#)

S.C. 1999, c. 33

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