



**Stockholm Convention
on Persistent Organic
Pollutants**

English only

Persistent Organic Pollutants Review Committee

Sixth meeting

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Item 4 (e) of the provisional agenda*

Technical work: intersessional work on substitution and alternatives

**Comments and responses relating to the draft guidance
document on alternatives to perfluorooctane sulfonate and its
derivatives**

Note by the Secretariat

The annex to the present note contains a table listing the comments and responses relating to the draft guidance document on alternatives to perfluorooctane sulfonate and its derivatives (UNEP/POPS/POPRC.6/INF/8). The annex has been reproduced as submitted by the intersessional working group and has not been formally edited by the Secretariat.

* UNEP/POPS/POPRC.6/1/Rev.1.

Annex

Comments and responses relating to the draft guidance document on alternatives to perfluorooctane sulfonate and its derivatives

Minor grammatical or spelling changes have been made without acknowledgment. Only substantial comments are listed.

Source of Comment	Page	Paragraph	Comment	Response
Brazil		87	Could be re-written more precisely: "The uses of PFOS to manufacture baits for ants and in insecticides against beetles and ants are obsolete in the EU, and the USEPA did cancel the registration of sulflumid in May 2008. According to information submitted to the Stockholm Convention, 3 tons of sulfuramid was used for next control (cockroaches, white ants and fire ants) in China, and sulframid is also used in Brazil in 95% of all baits for the control of leaf cutting ants, but the amount of PFOS was not reported. "	Accepted.
Canada		11	The statement "As long as PFOS is in a container, it is under control and no damage will occur." This seems to be a fairly broad statement. You may want to consider revising it to allow for other possibilities, such as "As long as PFOS is in a container, it is likely to remain under control and no damage will likely occur."	To be discussed at POPRC6.
Canada		65	Canada also exempts photographic coating. Therefore, "as well as Canada" can be added to the end of the Paragraph.	Accepted.
Canada		114	We would like to revise the information provided on Canadian stockpiles of AFFF containing PFOS. Please revise the fifth sentence to: "Canada reports an estimated 300 tonnes in stockpiles of PFOS-containing fire fighting foams, representing approximately three tonnes of PFOS."	Accepted.
Canada		115	Canada also has information on the costs of destroying AFFF. You may want to consider adding the following sentence: "In Canada, in 2006, the value of the disposal and replacement costs for their PFOS-based fire fighting foams was estimated to be in the order of \$700 000 (CAN)."	Accepted.
Canada		148	The substance identified in this paragraph (CAS no. 65530-63-4) was identified as being imported into Canada in quantities of up to 100 000 kg/year in 2004. As it is a known precursor of long chain PFCAs, this substance is included in our Environmental Performance Agreement Respecting Carboxylic Acids and their Precursors in Perfluorochemical Products Sold in Canada. This agreement is between the Government of Canada and participating perfluorochemical product manufacturers and importers, and requires the participants to reduce by 95% the product content levels of PFCAs and their precursors by December 31, 2010 in products sold in Canada, and to work to eliminate the use of these substances in products sold in Canada by December 31, 2015. The Agreement was finalized and came into effect end of March 2010.	To be discussed at POPRC6.

Source of Comment	Page	Paragraph	Comment	Response
Canada		155	<p>The substance identified in this paragraph (2-propenoic acid, 2-methyl-, hexadecyl ester (hexadecyl methacrylate), polymers with 2-hydroxyethyl methacrylate, g-w-perfluoro-C10-C16-alkyl acrylate and stearyl methacrylate (CAS no. 203743-03-7) has been prohibited for manufacture, use, import, sale and offer for sale in Canada as it is a precursor to long chain PFCAs. Note that the following substances are also prohibited by the same Regulation:</p> <ul style="list-style-type: none"> - Hexane,1,6-diisocyanato-, homopolymer, reaction products with alpha-fluoro-omega-2-hydroxyethyl-poly(difluoromethylene), C16-20-branched alcohols and 1-octadecanol - 2-propenoic acid, 2-methyl-, 2-methylpropyl ester, polymer with butyl 2-propenoate and 2,5-furandione, gamma-omega-perfluoro-C8-14-alkyl esters, tert-Bu benzenecarboperoxoate-initiated - 2-propen-1-ol, reaction products with pentafluoriodoethane tetrafluoroethylene telomer, dehydroiodinated, reaction products with epichlorohydrin and triethylenetetramine 	Information inserted.
Costa Rica			Need for more information on other fluorinated surfactants, especially in what regards to the environment and toxicity, including the shorter chain fluorinated agents.	To be discussed at POPRC6.
Croatia			No comment	
Germany			The guidance document gives a good overview on alternatives to PFOS in different application ranges with up-to-date references. We could not verify all information. In addition we cannot provide additional information on substitutes and alternatives.	Noted.
Germany	Several	Several	Editorial changes	Accepted.
Germany	12	46	In textile impregnation and surface protection, added a paragraph on Bionic Finish Eco (result of a partnership)	Accepted.
Germany	13	56	Need to revise whether foam is useful for dyestuff and ink	To be discussed at POPRC6.
Japan		114	In Japan, the stocks of AFFF were 19 000 tons (50% are stored in 23 000 underground parking areas) (updated the figures)	Accepted.
Mexico			No comment	
Qatar			No comment	
Romania			No comment	
Slovakia			No comment	
Sweden		Several	The view that the regulation of PFOSF has a important role has to be reflected better in the entire Guidance doc.	Accepted.
Sweden		30	The Guidance must reflect the difference between acceptable purposes and exemptions.	Accepted.
Sweden		36	Provide reference.	Accepted.
Sweden		217	Restructure after acceptable purposes and specific exemptions.	To be revised at POPRC6.
Sweden		219	This section must be rephrased to better reflect the fact that .there are uses where the use is small and the function important to the society. (Computers, Aviation) it is therefore COP4 adopted certain acceptable purposes with longer time to adjust to alternatives. The costs	To be further considered at POPRC6.

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			of the loss of function and not good enough alternatives are too high. Higher costs of the alternatives are NOT the problem. It is the high costs of not continuing the use of small amounts of PFOS.	
USA	Several	Several	Editorial changes	Accepted.
USA	6	10	Need to change terminology (take out “extremely” in “extremely hazardous”)	Accepted.
USA	7		POPRC should not state which exemptions should be eliminated as this is COP’s mandate	Accepted.
USA	8	17	More details required related to the decisions SC 4/17 and SC 4/19	Decision SC-4/17 is added in the beginning.
USA	11	33 and 34	Suggestion to make terminology more strict (replace “should” by “must”; have both conditions met for “safer alternatives”)	To be further considered at POPRC6.
USA	13	58	Need to be more specific in date of information reception	Deleted “earlier”
USA	15	74	Wording needs to reflect the fact the PFOS applications listed above are still exempted from bans; it also needs to be more coherent (non-critical vs critical uses)	To be further considered at POPRC6.
USA	16	86, 87	Uses that are no longer ongoing since the tolerances have been revoked are mentioned. Perhaps a need to take out the uses which are no longer ongoing.	To be further considered at POPRC6.
USA	35		The recommendations related to precaution seem to go beyond scope of paper (which is not to present risk management recommendations nor recommend revising exemptions)	Deleted.
USA	35		“Need to phase out relatively useless uses” is beyond the scope of this document.	Deleted.
ABRAISC A(Brazil)	16	87	The information in the last part of the last sentence is incorrect, it should read: “sulfluramid is also used in Brazil in more than 95% of all baits for the control of leaf cutting ants , but the amount of PFOS was not reported”. The reason for such changes is that the text must clarify that: 1- Sulfluramid “is” used, not “was”; 2- the baits mentioned are used specifically “for the control of leaf-cutting ants”, actually only against Atta spp and Acromyrmex spp (see “acceptable purposes” on page 3 of the draft).	Accepted.
ABRAISC A(Brazil)	16	89	Proposes to change the paragraph to: “Currently, the active ingredients registered in Brazil for ant baits for the control of leaf cutting ants are: Sulfluramid , Fipronil, Endosulfan and Chlorpyrifos. However, Endosulfan, Fipronil and Chlorpyrifos were considered more acutely toxic to humans and the environment than Sulfluramid. Also, Endosulfan is a candidate for addition to the Stockholm Convention. The effectiveness of these products has also been questioned, thus new alternatives are being studied in Brazil. According to the Brazilian Annex F information, Sulfluramid cannot presently be efficiently replaced in Brazil by any other registered products commercialized for the same purpose (UNEP/POPS/POPRC.3/20/Add.5). Sulfluramid is, among the actives ingredients,	Accepted.

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			<p>the only one with all features necessary for the good operation as an ant bait, which places it as the single efficient option to control leaf-cutting ants (CAMERON 1990; FORTI <i>et al.</i> 2007; NAGAMOTO <i>et al.</i> 2007) (<i>UNEP-POPS-POPRC-SUB-F08-PFOS-LEAF1-English.pdf</i>).</p> <p>This revision may make the text clearer in respect to the existing active ingredients registered in Brazil for the control of leaf-cutting ants but that cannot be considered alternatives to Sulfluramid (see <i>UNEP-POPS-POPRC-SUB-F08-PFOS-LEAF1-English.pdf</i>), and that new real alternatives have been researched. It is important to mention that until now just two really effective and feasible active ingredients were widely used in baits against leaf-cutting ants: the first one was Dodecacloro, which was used from the 60"s until the 90"s and the second one is Sulfluramid, which has been used since the 90"s. Considering this and the registration time which Brazilian bureaucracy imposes to a register (5 years average), the baits sector needs at least 10 years to make sure a feasible alternative is accurately tested and registered with compliance.</p>	
ABRAISC A(Brazil)	17	90	<p>The second part of the paragraph "Exotic and leaf-cutting ants...safe alternatives do exist" leads to wrong conclusions.</p> <p>In fact, "There are countless differences between leaf-cutting ants and exotic ants (urban ants), including alimentary behavior among them. Such differences explain why certain active ingredients are efficient for urban ants and not for leaf-cutting ants. The IGRs (insect growth regulators) tested for leaf-cutting ants, like fenoxycarb, pyriproxyfen, diflubenzuron, teflubenzuron, silaneafone, thidiazuron, tefluron, prodrone, and methoprene did not cause mortality in the leaf-cutting ant farms, and the results were no different from the ones witnessed (FORTI <i>et al.</i> 1998; NAGAMOTO <i>et al.</i> 2004) (<i>UNEP-POPS-POPRC-SUB-F08-PFOS-LEAF6.English.pdf</i>). An adequate insecticide used to formulate ant baits for the control of leaf-cutting ants shall be lethal at low concentrations, act by ingestion and present a delayed toxic action. Additionally, it shall be odorless, non-repelent, so as to be dispersed by trophallaxis to most workers in the colony (FORTI <i>et al.</i> 1988). Since 1958, over 7,500 chemical compounds have been studied in many countries for ant control. Less than 1% of those 7,500 studied compounds have proven to be promising in such control. (FORTI <i>et al.</i> 1998) (<i>UNEP-POPS-POPRC-SUB-F08-PFOS-LEAF1-English.pdf</i>)."</p> <p>The arguments for such change are that considering that at least 9 (fenoxycarb, pyriproxyfen, diflubenzuron, teflubenzuron, silaneafone, thidiazuron, tefluron, prodrone,</p>	Accepted.

Source of Comment	Page	Paragraph	Comment	Response
			and methoprene) IGRs (insect growth regulators) were tested for the control of leaf-cutting ants and were not effective (<i>UNEP-POPS-POPRC-SUB-F08-PFOS-LEAF6.English.pdf</i>) and also that piperonyl compounds were tested in laboratory colonies, not field adult nests ,it is not reasonable to assume that it “may be an alternative” yet, not even mention that “efficient and safe alternatives do exist”. The paper mentioned, itself, says that such compounds may be used in the future but no additional research was conducted. The COP decision to include the leaf-cutting ant baits as an acceptable purpose certainly is based in technical data and long discussions during the POPRC and COP meetings and it would be an incoherence for this new draft to affirm otherwise.	
IPEN	6	5	Rephrase the last sentence; insert “which may be less hazardous”.	Accepted.
IPEN	6	8	Insert “This mechanism would be consistent with Article 9.1b regarding the exchange of information on alternatives to POPs.”	Accepted.
IPEN	10	28	Insert “after production was voluntarily suspended in the US.”	Accepted.
IPEN	11	30	Insert “acceptable purposes and”	Accepted.
IPEN		Several	"These are chemicals not listed in the Convention as mentioned above." Would these substances be captured by a ban on PFOSF?	Deleted the sentences.
IPEN	14	69	Insert “or human health, or the level of PFOS in electronic waste”	Accepted.
IPEN	15	78	Insert (0.3%)	Accepted.
IPEN	35		Insert “This reinforces the need for Parties to fulfil Article 9.1 regarding the exchange of information on alternatives to POPs.”	Accepted.