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Item 6 (e) of the provisional agenda*

Consideration of draft risk management evaluations: perfluorooctane sulfonate

**Comments and responses relating to the draft risk management
evaluation on perfluorooctane sulfonate**

Note by the Secretariat

The draft risk management evaluation on perfluorooctane sulfonate prepared during the intersessional period by the working group established by the Committee for this purpose is set out in document UNEP/POPS/POPRC.3/13. The annex to the present note contains a table listing the comments received in accordance with the standard workplan for the preparation of a draft risk management evaluation and responses to those comments by the working group. The annex was prepared by the working group and has not been formally edited.

* UNEP/POPS/POPRC.3/1.

Annex

Comments and responses relating to the draft risk management evaluation on perfluorooctane sulfonate

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

The table has been subdivided between comments from Parties to the Convention and those from non-Parties or observers.

Parties

Section of Draft	Source of Comment	Comment	Response
Whole document	Armenia	General support	No action needed
	Canada	Canada has proposed regulatory action to prohibit PFOS and related substances as well as products and formulations containing these chemicals. The regulations provide exemptions for certain continued uses. The addition of PFOS to Annex A of the Convention is inconsistent with Canada's proposed domestic regulations	No action needed
	Germany	General support	No action needed
	Mexico	General comment on need for international cooperation in identifying commercial products and constituents	No action needed
	Qatar	No comments	No action needed
	Sweden	No comments	No action needed
1.1.2	Australia	Suggest delete PFOS as impurities as this is a complex issue, in addition not all compounds that contain PFOS as an impurity are PFOS-related substances	Changed to "which may contain PFOS impurities"
		This should be the other way around i.e. the perfluorinated carboxylic acid and sulphonic acid containing compounds. Information on PFOA is however not relevant to this document.	Wording on other than PFOS deleted
		A definition of PFOS related substance would be useful here. Suggest using the definition "The term PFOS related substance represents any substance containing the PFOS moiety (C8F17SO2) with the potential to degrade to PFOS in the environment (Environment Agency UK, 2004).	Definition given on top of page 5 corresponding to that of the EU.
		Suggest including another column with the basis for inclusion of compounds as PFOS related substances by the countries and OSPAR.	Table and references to it deleted
		It would be useful to avoid referring to perfluoroalkyl sulphonates with a carbon chain greater than 8 carbons as PFAS because PFAS as a group would also contain short fluorinated carbon chain it would be useful to avoid ref	Text on other PFAS deleted
1.1.5.		Update on national action	Inserted

Section of Draft	Source of Comment	Comment	Response
2.3.5		We do not agree with the last sentence regarding reduction of release from using ready-to-use formulations. Release of 30 tonnes of sulphuramid annually to the environment will result in all of it being degraded to PFOS	Inserted with some editing
2.3.6.		The 2006 OECD survey identified use of perfluorobutane sulfonate (C4 PFAS) as mist suppressants	Inserted
1.1.2	Japan	Y=OH, metal" should be "Y=OH,O-Metal	Text quoted as used in EU regulation. No change.
		This section mentions both PFCs and PFCAs, but the text is irrelevant to PFOS	Text deleted
1.3		The following is the source of information of this use: "Japan Medical Devices Manufacturers Association (JMED)	Submission comes from Japanese Government. No change.
2.1		Radiopaque catheters composed of ETFE, such as catheters for angiography & indwelling needle catheters" to section A, and "Electric and electronic parts" to section B.	Inserted
		Move "fire fighting foam" from section B to section A.	Not consistent with data from other Parties and observers. No action taken
2.3.1		The first paragraph should be replaced by the following: "For remaining uses, to date there are no known alternatives to PFOS-related substances."	Intent covered by present text. No change.
		"The antistatic properties of PFOS materials also provide important safety features by controlling the build-up and discharge of static electricity, thus preventing injuries to employees and users, damage to operating equipment and products, and fire and explosion hazards."	Inserted
2.3.6			Changed to 2.3.7 due to new section 2.3.6, see below.
New 2.3.6		Suggestion for new section on medical devices with text	Inserted with some editing.
New 2.3.7		<ul style="list-style-type: none"> • Pretreatment agent for plastic plating • PTFE powder plating treatment agent • Pretreatment agent for printed circuit board plating • Stainless steel electric grinding agent • Chemical abrasive agent for copper alloy" 	Inserted
		"Therefore, PFOS mist control agents are still needed to protect workers' health."	Inserted with some editing.

Section of Draft	Source of Comment	Comment	Response
New 2.3.8		"In Japan...it means that the market has stockpiled some 21,000 tons of PFOS fire fighting foam concentrate, and some 11,400 tons of fire fighting foam contains PFOS. The majority of market stock is fire fighting foam for water-immiscible liquids, and non-PFOS alternatives are marketed for this use. However, it is estimated that replacement will take 10 to 15 years based on present production capacity...(Japan, 2007)."	Inserted with some editing.
New 2.3.9		Suggestion for a section on electric and electronic devices with text	Inserted with some editing.
2.4.4		Text on medical devices	Inserted with some editing
		Photo imaging; add "and would impose significant financial burdens, not only on the manufacturers of photo imaging products, by requiring substantial investment in research and development, but also on users, by compelling them to replace their current systems with costly new systems, such as alternative digital systems"	Inserted with some editing
		Metal plating; add: "In Japan it has been estimated that the cost would be US\$40,000 for each 1000-liter bath, and this would affect more than 1,000 plating companies, which are mainly SMEs (Japan, 2007)."	Inserted.
		Fire fighting foam; add: "The cost of PFOS FFF incineration is estimated at approximately US\$1,000/t and incineration capacity is limited. Thus, it is difficult to estimate the time necessary for destruction"	Inserted.
2.5.3		Change to: "c) industry phase-out schedules that are known for non-critical uses in semiconductor manufacturing and processing; and"	Non-critical added to critical.
3.2		Option 2; add: "This option is the most consistent with the present uncertainty surrounding the availability of alternatives for several critical uses over the next five to ten years, considering the health and environmental concerns about perfluorinated alternatives."	Inserted with some editing.
		<p>Conclusions; add: "In comparing options 1 and 2 with options 3 and 4, it seems most logical to regulate PFOS under the Convention as an intentionally produced POP which should eventually be phased out. It is therefore proposed to list PFOS in Annex A or B of the Convention.</p> <p>There is a need for some remaining critical uses for the foreseeable future, and availability of alternatives is uncertain. It is therefore suggested to list PFOS in Annex B of the Convention.</p> <p>Acceptable purposes and specific exemptions should be considered based on the feasibility of substitution for such use and the time frame of substitution. Detailed conditions of acceptable purposes and specific exemptions are contained in a new Part III to Annex B. A suggested outline of Part III can be found in the Appendix.</p>	Text redrafted to reflect variety of views.

Section of Draft	Source of Comment	Comment	Response
		<p>The new Part III should be reviewed by COP periodically to ensure progress toward minimization of use.</p> <p>There are still issues concerning PFOS-related substances that need to be examined. It is considered to be premature to propose PFOS-related substances as a POPs candidate, given the absence of sufficient scientific evidences."</p>	
2.4.4	Switzerland	How has this changed from US/Can ? \$ 6.35 million in the previous version?	Decimal point lost. Corrected.
3.2		Not clear why a Part III needs to be created. Can it not be included in Part II along with DDT? Same comment applies for Annex A listing. In this case it could be included in Part II with PCBs?	If so, Part II needs to be further subdivided. More practical with a separate Part III to highlight the specific conditions for continued use
Whole document	Norway	General support	No action needed
3.2		<p>1) The difference between option 1 and 2, and the reason why Option 1 is recommended in the conclusion should be made clearer in the text.</p> <p>2) It is unclear if it is only PFOS or if it is PFOS and related substances that are proposed to be listed in Option 1 and 2 in the text.</p> <p>3) If just listing of PFOS is considered in Option 1 and 2, the option to list PFOS and related substances should be explored as well</p>	<p>While Sweden had included PFOS related chemicals in its submission, the Committee deferred decision on them to the risk management evaluation phase, and had reported to the COP on actions being taken on precursors and related chemicals</p> <p>The manner in which to address related chemicals, including whether or how to bring to the attention of the COP, will be discussed by the Review Committee.</p>

Non-Parties or Observers

Section	Source of Comment	Comment	Response
Whole document	Former Yugoslav Republic of Macedonia IITC-IEN	No information	No action needed
		Generic comments on listing of PFOS in Annex C and on exemptions	Please note the responses to these issues under the IPEN comments below: 1. consultation on PFOS alternatives with green chemists 2. Eliminate the exemption for use of PFOS in ant baits 3. Consider PFOS alternatives described by the Danish EPA 4. interests of the Arctic indigenous peoples 5. List PFOS in Annex C as well as Annex A
2.3.2 3.2	3M	Generic comments on the document and on the workings of the POPRC	No action taken
		Questioned the accuracy of the 2 nd paragraph on page 5	Text edited
		Remove reference to PFOA	Text edited
		Section 2.4 sweeping statements to be deleted	Text edited
2.3.2 3.2	SIA;ESIA,SE MI	Reference to Article 6	Issue flagged at the Preamble to the RME No action taken
		Generic statement concerning including listing in Annex B at several places in the draft text	No action taken
2.3.2 3.2		Some suggested redrafting of text on costs	Inserted with some editing
3.2		Suggested including under Option 2: "This approach would also be consistent with other recently adopted international risk management measures for PFOS, such as the EU directive 2006/122, which generally bans PFOS use except for certain exemptions for continued uses with specific high socio-economic relevance, and which provides for a review process but does not impose a time limit on those exemptions."	EU directive extensively quoted earlier in the text. No action taken.
Executive Summary	United States of America	As indicated in the previous draft, listing in Annex A is not the appropriate mechanism for the POPRC to recommend, precisely because the known and explicitly recognized circumstances surrounding the continuing uses of PFOS indicate that elimination, which is envisioned by Annex A, will not prove feasible for the foreseeable future. Annex B exists for the express purpose of controlling and restricting POPs substances which nonetheless present a need for continuing uses, and thus appears to better align the intent of the Convention with the reality of the management of PFOS for the foreseeable future. Given the nature of certain ongoing low volume/low exposure uses and the lack of feasible alternatives for those uses, listing on annex B should be included as part of the recommendation.	Text modified

Section	Source of Comment	Comment	Response
Section 1.1		Regarding coverage of the PFOS-related substances proposed by Sweden, the POPRC's Article 8 and Annex D and E-related decisions have been made on PFOS, not the related substances. While the several salts listed below readily dissociate to the PFOS anion, it is not clear whether the 96 PFOS-related substances in the proposal meet the Annex D criteria	While Sweden had included PFOS related chemicals in its submission, the Committee deferred decision on them to the risk management evaluation phase, and had reported to the COP on actions being taken on precursors and related chemicals. The manner in which to address related chemicals, including whether or how to bring to the attention of the COP, will be discussed by the Review Committee
Section 1.1.2		What is the effect/intent of this language? There are other approaches discussed in the document, so it is unnecessary to give this approach such prominence. Please revise to reflect a more balanced view or place this in a more appropriate section.	In the context of this draft risk management evaluation this definition of PFOS has been used
Section 1.1.2		What is the time context of this trend? It's not clear when this trend was occurring.	Text deleted
Section 1.1.2		Does this sentence belong here?	Text deleted
Section 1.1.2		Original sentence was ambiguous as to whether PFOS is the final deg. product, or the final deg. product of PFOS was something else	Text modified
Section 1.4		This paragraph needs to be updated with the results of the LRTAP meeting.	Text to be updated
Section 1.5		Clarify: Manufacture, use, or per se?	Clarification provided
		This paragraph is confusing as written and needs to be revised.	Modified text
		for use in ?	Modified text
Section 2.1		This is not an appropriate consideration as the Convention will apply to the chemicals which are proposed, accepted by the POPRC as satisfying relevant Article 8 criteria, and agreed by the COP for addition, and not other chemicals. Issues concerning chemicals beyond the proposed substances are not a factor for consideration when assessing control measures on PFOS– the substances must have already been entered into the process and be judged by the POPRC to sufficiently meet the criteria/risk profile elements to get to this point. Using the approach contained in this document with this language opens a back door to add substances that were not already judged by the POPRC to satisfy the relevant Article 8 requirements. This is not an acceptable change to the process and should be fixed.	While Sweden had included PFOS related chemicals in its submission, the Committee deferred decision on them to the risk management evaluation phase, and had reported to the COP on actions being taken on precursors and related chemicals. In considering the manner in which to control a substance such as PFOS, it is important to consider possible risk management actions for related chemicals, inasmuch that such actions would have an impact on efficacy of measures under consideration. The manner in which to address related chemicals, including whether or how to bring to the attention of the COP, will be discussed by the Review Committee.

Section	Source of Comment	Comment	Response
		<p>"Principles of Polluter Pays and Intergenerational Equity" should not appear here. In international law, "principles" is a term with specific meanings which do not apply here, and especially when they are being put forward as presenting concepts that have not been formally recognized or adopted by the Convention being addressed. Only the factors specified under the Convention should be addressed here; this discussion goes beyond the terms of the Convention. This document should not be used as a vehicle to rewrite Article 8 of the Convention.</p>	text removed
		<p>Because of the lack of information supplied in the proposal and otherwise available, the POPRC made no conclusions re the Annex D screening criteria nor did it develop Annex E risk profiles for "PFOS-related substances." Thus, listing of these substances is inappropriate under the Article 8 process.</p>	<p>While Sweden had included PFOS related chemicals in its submission, the Committee deferred decision on them to the risk management evaluation phase, and had reported to the COP on actions being taken on precursors and related chemicals. The manner in which to address related chemicals, including whether or how to bring to the attention of the COP, will be discussed by the Review Committee.</p>
		<p>Given that Article 5 and Annex C applies to releases of unintentional POPs from anthropogenic sources, and the discussion that follows recognizes that Article 5 does not envision coverage of chemicals that are the result of non-anthropogenic transformation processes, the discussions relating to listing on Annex C should be deleted to better focus the paper. The document should not undercut or dismiss the value of the industry submissions. The fact is that the industry submitted data have been found sufficiently definitive for multiple governments to take actions recognizing that substitutes are NOT available. Submissions, do however, need to be identified as coming from industry when referred to in this document.</p>	<p>The text is retained to present the Annex C option and issues relating to it.</p> <p>Text has been edited.</p>
Section 2.2		Should the date be 2014?	Changed text
Section 2.3		<p>Footnote deleted since PFOS is not an unintentional degradation product of precursors.</p>	<p>PFOS is an unintended product of precursors as stated in the Executive Summary</p>
		<p>As a "needs" statement, the bullet points do not accurately state what is specified in Art 8 and annex F. Please make the appropriate changes.</p>	Text modified

Section	Source of Comment	Comment	Response
Section 2.3.1		<p>Seems redundant to say "and other studies" given that studies (i.e., "extensive work") in the U.S. and other countries are already included under "these studies".</p> <p>As a general matter, if the doc is not going to follow the outline given in the Annex for info (here it subheads because of the complexity) there should be some kind of headers with the doc to identify which Annex F issue is being discussed.</p> <p>This is same problem as opening para in 2.1 – this goes beyond what is specified in Art 8 and annex F.</p>	<p>Changes accepted</p> <p>Annex F lists information requested to support preparation and decision on risk management evaluations; the evaluation is prepared in accordance with the Annex. For improved flow, the current evaluation does not separate the Annex F issues into separate sections.</p> <p>While Sweden had included PFOS related chemicals in its submission, the Committee deferred decision on them to the risk management evaluation phase, and had reported to the COP on actions being taken on precursors and related chemicals.</p> <p>In considering the manner in which to control a substance such as PFOS, it is important to consider possible risk management actions for related chemicals, inasmuch that such actions would have an impact on efficacy of measures under consideration.</p> <p>The manner in which to address related chemicals, including whether or how to bring to the attention of the COP, will be discussed by the Review Committee.</p> <p>Costs were left as originally reported.</p>
		Note that the values expressed shift back and forth between dollars and euros here and elsewhere in the document; either choose one value expression, or provide the values for both in each instance where a value is quoted.	Secretariat is asked to add values in other currency in brackets.
		If these estimates are from industry, add "...previous industry costs estimates..	Clarification being sought.
		Why likely an over-estimate?	Clarification being sought.
Section 2.3.2		This is not clear. Should it be "substances, which provide the resultant...".	Text modified
		This seems redundant with "design" given that the technology will be invented, not discovered. Otherwise, add "identify" before "design" above.	Modified text
		Not clear if this is from the photolithography uses. If so, that would be a 26% increase from 2002 for the sector. Whose estimate?	Clarification being sought.
Section 2.3.3			text modified
Section 2.3.4		Spell out or define TFT.	Acronym spelled out
		If this has been the case historically, can it just say, "The process of qualifying... has	Text modified

Section	Source of Comment	Comment	Response
Section 2.3.5		historically taken about 10 years.... It's not clear if sulfuramid is used in these granulated baits. This should be confirmed.	This distinction is made clear further on in the paragraph. No change
Section 2.3.6		To which specific plating uses does this information pertain?	Information being sought
Section 2.3.7		What does "renew" mean here? in the EU and Japan combined...?	Information being sought Information requested
		This would be clearer if we were told the concentration of PFOS in the foam concentrate.	Information requested
Section 2.4.1		It is debatable whether this conclusion could be measurable, given current volumes; it appears to be contradicted by statements in 2.3.	text modified for clarification
Section 2.4.3		Is it agreed that reproductive effects are the effects of greatest concern Please provide citation for these sentences.	Text modified References provided
Section 2.4.4		To which country does this pertain? Or, is it the EU?	Modified text
		If one unit is a kilogram, this should say kilogram, not unit.	Text changed
Section 2.4.6		The FFFC inventory document is available on www.regulations.gov as document number EPA-HQ-OPPT-2003-0012-0714. Copies of this document were provided earlier in the POPRC process.	Noted
		These actually involve PFOS derivatives which are not the subject of the review. Articles containing these PFOS compounds would NOT be subject to Annex 6 under the current listing action.	Point noted
Section 3.1		Define BCF, BMF , and BAF in the text Which countries are still producing? Without this information being presented and considered, how can an informed production decision be possible?	Text deleted Information being sought
Section 3.2		This objective is not that stated in Article 1 of the Treaty for POPs, i.e., "to protect human health and the environment" from persistent organic pollutants."	Modified
		Those materials would be subject to other listing as appropriate. Not clear this is a factor to include in listing PFOS.	Modified
		This emphasis on elimination would appear to suggest an interpretation going beyond the text of the Convention itself.	Modified
		Sale" and "offer for sale" controls are not envisioned in the framework Convention	Text deleted

Section	Source of Comment	Comment	Response
		The following text was deleted because it is not a required condition for such an annex.	Modified
		This text was deleted because it is too narrow; there are some uses for which substitutes are available but which will require phase-out time. See comment number 9 for the rationale for deleting all the Annex C language and options below.	Modified, recognizing that Part III will elaborate on allowed uses and related time-lines The text is retained to present the Annex C option and issues relating to it.
		Please note in the text that listing PFOS on Annex A may have implications for countries joining the Convention for this substance, in light of ongoing uses for which no alternatives have been developed. Annex B, which is a restriction annex, may not present such constraints and we recommend that approach at this time. It would be our view that when alternatives are developed for these remaining uses, the COP could subsequently consider a decision to shift PFOS from Annex B to Annex A.	Text modified
		This statement is not correct, and is at odds with the expressed purpose of annex A vs B. As long as chemicals remain on B they are subject to restrictions – a COP decision is required to move them to elimination.	Modified
		The final two options have been deleted as being in conflict with Article 5 of the Convention	The text is retained to present all options and issues relating to them.
		Pressing for an eventual phase-out would go beyond the purpose of Annex B This entire conclusion section should be rewritten to eliminate all reference to the use of Annex C, and to proffer Annex B as the preferable and logical option, rather than Annex A. The issue to be addressed by this conclusion is not whether PFOS is a bad chemical from which human health and the environment should be protected - all POPs are bad chemicals in this regard, by definition. The issue to be addressed is whether elimination or restriction is the necessary or appropriate course of action, and the need for continuing essential uses would indicate that restriction rather than elimination is the course that should be pursued.	Deleted " which should eventually be phased out " Text modified
Appendix Part III		This is not consistent with p. 17 heading, "Uses for which alt. substances or technologies may be available but would need to be phased in."	Appendix deleted, now an INF document

Section	Source of Comment	Comment	Response
		This seems to go beyond the parameters of this document. Please delete the specifics. This could be read as forcing countries to transfer technologies, which may or may not be appropriate.	Appendix deleted, now an INF document
1.1.2	IMIA /EPIA/PMM A	Change to: other salt (<u>O-M+</u>).	Text quoted as used in EU regulation. No change.
2.1		Change to: Uses for which at present, according to <u>the evaluations of a number of national and regional competent authorities</u> , no technically feasible alternatives are available	No change
2.3.1		Chemicals or classes of chemicals that may be considered alternatives to PFOS-related substances on an industry-wide basis (or even a company-wide basis) <u>have been recognized as not currently being available</u> for the <u>photo imaging</u> industry	Text has already been modified to reflect these points
		Change to: Estimates of releases from the photo imaging industry developed by UK Defra are 1.02 kilogram into waste water and 0.051 kilogram into air from manufacturing uses in the EU, and the industry estimates a total of less than 2 kilogram worldwide, by extrapolation “The estimate is more likely to be an overestimate ...” is not supportable and we recommend its deletion.	Text changed
2.4.1		Change to: If production and use of PFOS and PFOS-related substances are not <u>managed appropriately</u> , then levels in the environment including humans and animals <u>may</u> continue to rise, even in locations distant from production and use	Text has already been modified to reflect these points
		Change to: Based upon assessments conducted by a number of governments, the ongoing critical uses of PFOS-related substances in the photo imaging industry do not appear to pose a significant risk to the environment or human health	Text has been modified to indicate industry -provided information
2.4.4		Change to: manufacture a number of <u>important</u> imaging products, including diagnostic medical products, industrial X-ray (non destructive testing), graphic printing (printing mask) and would impose a significant cost <u>not only on the manufacturers of these products</u> by requiring substantial investment in research and development, <u>but also on users who would be required to replace their current systems with costly alternatives</u>	Text has already been modified for the last two insertions

Section	Source of Comment	Comment	Response
General		In the absence of currently known alternatives for the few remaining PFOS-related substances, the photo imaging industry recommends against the establishment of specific deadlines for phasing out their use.	Noted, flagged in the Preamble to the RME
		recommends the listing of PFOS-related substances in Annex B	Noted
General	IPEN	Consider PFOS alternatives as described the Danish Environmental Protection Agency	Noted , text added for pesticides and semi-conductor
Executive Summary	IPEN	listing in both Annex A and C would address the manufacture, use, sale, import, and export of PFOS as well as the unintentional formation of PFOS from PFOS-related substances	Noted
		Addition of time-limited exemptions for specific uses	Noted, flagged in the Preamble of the RME
Section 1.4		Text on SAICM	No change
Section 2.1		Addition of time-limited exemptions for specific uses	Noted, flagged in the Preamble of the RME
		The POPRC should solicit the opinion of green chemists and other experts that do not have a conflict of interest to determine the feasibility or existence of alternatives. Unacceptable to grant an exemption for ant baits for use of a POP that is directly and deliberately released to the environment. Such an exempted use would be impossible to control or monitor its dispersed use and subsequent disposal. Such an exemption would see PFOS dispersed throughout the environment. This is not consistent with the goals of the Stockholm Convention.	Noted To be discussed by POPRC
Section 2.2		Text added: actual benefits are much greater since POPRC consulting other experts that do not have a vested financial interest in the matter on whether alternatives might exist or what the timeline for implementation might be	Deleted insertion Noted
Section 2.3.1; 2.3.2 ; 2.3.3;			
Section 2.3.1		There is some concern over worker exposure to PFOS during manufacturing since there is a consistent, dose-responsive association of fluoride exposure with spontaneous abortions in female workers (RR = 1.79 95% CI = 1.22-2.54) and photo resist chemicals (RR = 1.35 – 2.18 95% CI = 0.89 – 2.01; 1.30 – 3.40 respectively).	Study to be verified
Section 2.3.2		Despite these measures and concentrations below regulatory levels, studies demonstrate that exposure to other semiconductor industry solvents used in clean rooms resulted in higher rates of miscarriage in female workers. there is no measurable residual PFOS compound present in manufactured microprocessors. <u>However, there may be consumer exposures or concerns about releases from electronic waste disposal or recycling due to the highly bioaccumulative and persistent characteristics of PFOS</u>	The references in question pertain to the use of ethylene glycol and other solvents in the semi-conductor industry – these are not the substances under consideration. No change No change

Section	Source of Comment	Comment	Response
		<p>The costs would be borne by the semiconductor industry which had global sales of \$228 billion in 2005.</p> <p>The information in the “agreement” paragraph does not add useful information about phase-out details or when PFOS alternatives will be available. Instead it serves mostly as public relations promotion of industry associations and is not appropriate for this document.</p>	<p>Inserted text with modifications</p> <p>No change</p>
Section 2.3.4		What was used before PFOS was introduced?	to be determined
Section 2.3.5		<p>and its use represent a direct, deliberate release of PFOS to the environment.</p> <p>Any other source consulted about this besides the Brazilian pesticide industry</p>	<p>Text inserted with modifications</p> <p>Information submitted by Brazilian government</p>
Section 2.3.9		<p>Due to the long life of copiers/multi-function printers, if supplies of this part are stopped, millions of copiers/multi-function printers would require a substitute part.</p>	Related text added
Section 2.4.1		<p>(As we have pointed out previously, general unsubstantiated claims by an undefined ‘industry’ are not appropriate for this document, for example, ant baits exemptions have been included in these ‘critical’ uses yet there is no information to support claims of no impact)</p>	Noted
Section 2.4.3		<p>Environmental sampling studies conducted since the 2002 PFOS phase-out and already submitted to the committee by Canada suggest that environmental exposures to PFOS have decreased significantly in Canada as a result of the phase-out. (USA, 2007))</p>	Text replaced by original text from Canada
Section 2.4.4		<p>because the value of reduced damage to environment and health is difficult to quantify. In fact, there is no meaningful way of assigning a dollar figure to human and environmental health and this represents a fundamental difficulty with cost benefit analysis. Society may incur some specific costs when materials such as PFOS are removed from the market and when associated wastes and contaminated sites are addressed. The Polluter Pays principle (Rio Principle 16), under which such costs should be internalized by the producer and/or the user, may be applied, but this is seldom done (at least without regulatory assistance). No good estimates are available of the potential cost recovery that can be achieved since the original ‘polluter’ often cannot be identified or is no longer in business. Nonetheless, the Polluter Pays Principle may be applied to legacy problems if the original ‘polluter’ can be identified and if a Party’s regulatory framework permits.</p>	No change

Section	Source of Comment	Comment	Response
		It would be appropriate to state here where this alternative process has already been implemented	
		This section implies that the Japanese industry situation is true for the entire world. Is this true?	to be confirmed
Section 2.4.5		eliminating	text changed
Section 2.5.1		This section is weak and should go beyond promoting industry association websites. Instead, this section should analyze the public information implications of merely restricting uses of PFOS. Implementing control measures that restrict certain uses requires a Party to disseminate relevant information broadly in society and to enforce regulatory restrictions on all users. This can be difficult in countries with limited chemical regulatory infrastructure and may result in continued inappropriate uses of the listed POP. An Annex A listing generally involves control measures that are less burdensome to implement and therefore may often be more effective and suitable.	Noted
Section 2.5.2		This section is weak and only includes industry association information. Ideally, this section should include information about the ability of countries to regulate and track entry, uses, and disposal of PFOS. If the control action is restriction, then the country would have to be able to adequately monitor the substance to ensure that only the permitted uses occur and this may require extensive resources and infrastructure that the country does not have. In these cases, prohibition under an Annex A listing may be the most cost-effective option.	Noted
Section 3.2		Article 5 measures of the treaty, do, in fact, envision controls on transformation processes that occur outside the physical confines of the actual source facility.	Text modified and to be discussed at POPRC