



Distr.: General  
29 August 2007

Original: English



**United Nations  
Environment  
Programme**

**Stockholm Convention on Persistent Organic Pollutants  
Persistent Organic Pollutants Review Committee  
Third meeting**

Geneva, 19–23 November 2007

Item 4 (b) of the provisional agenda \*

**Operational issues: listing of precursors**

**Listing of precursors**

**Note by the Secretariat**

1. At its second meeting, which took place from 7 to 11 November 2006 in Geneva, Switzerland, the Persistent Organic Pollutants Review Committee discussed how to deal appropriately with precursors of perfluorooctane sulfonate (PFOS) as opposed to PFOS itself. This is an important issue if PFOS and/or PFOS precursors are to be listed in the future under Annexes A, B or C of the Stockholm Convention. Several representatives at the third meeting of the Conference of the Parties also raised the issue and the Conference concluded that further consideration should be given to "...how such substances as perfluorooctane sulfonate and its precursors....should be dealt with under the Convention."

2. At the request of the Chair of the Committee, the Secretariat has consulted with experts and offers the following thoughts for consideration by the Committee pertaining to how PFOS precursors might be listed under the Convention:

(a) PFOS precursors are substances which will be metabolized or otherwise transformed (thermally, photolytically, hydrolytically, etc.) to PFOS in the environment once released. They may have short, medium or long half-lives. Some of these precursors may not meet the criteria of Annex D of the Convention; each, however, will ultimately degrade and contribute to environmental loading of PFOS;

(b) One approach would be to list PFOS as a persistent organic pollutant and to list each of its known precursors. This approach might require an evaluation of each precursor regarding its degradation rate or half life in the environment and a risk management decision for each one. New precursors would need to be reviewed and added one at a time through the Committee's review process;

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\* UNEP/POPS/POPRC.3/1/Rev.1.

(c) A second approach might be to list groups of precursors by their uses which contribute to their loss to the environment. For example, list all uses of PFOS precursors which lead to environmental losses. This approach would require that a review of new uses be undertaken from time to time to determine if there is a potential release to the environment associated with a reported new use;

(d) A third approach might be to combine the two approaches above to list any precursor of PFOS with an exception for those used only for non-dispersive losses. For example, PFOS precursors used in electroplating might be exempted because the potential for environmental loss is very small;

(e) A fourth approach might be to list precursors based on patent specifications, e.g., to list PFOS precursors of a generic type according to a formula. This would result in the listing of, for example, any substance of type  $C_8F_{17}SO_2-X$ , where  $X = OH, Cl, Br, I, F, OR, NR_1R_2, SR$ , R being defined as alkyl oxyalkyl, aminoalkyl, arylalkyl etc, and  $R_1/R_2$  as H, alkyl, cycloalkyl, oxyalkyl, aminoalkyl, arylalkyl, etc.;

(f) A fifth approach might be to list precursors based on the potential for all substances containing the PFOS chemical moiety to transform to PFOS and to list PFOS precursors according to the chemical formula. This approach would involve the listing of all molecules having the molecular formula  $C_8F_{17}SO_2Y$ , where  $Y = OH, \text{metal or other salt, halide, amide and other derivatives including polymers.}$

### **Possible action by the Committee**

3. The Committee may wish:

- (a) To consider the information provided in the present note;
  - (b) To develop and agree upon an approach for listing PFOS precursors;
  - (c) To decide whether any approach adopted for PFOS should be considered for precursors of other chemicals proposed for listing in Annexes A, B or C of the Convention.
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