

## Quick Guide to IPEN Views on POPRC11

October 2015

### DecaBDE

At POPRC10, the Committee concluded that BDE-209 (the main constituent of DecaBDE) is likely, as a result of its long-range environmental transport, to lead to significant adverse human health and environmental effects, such that global action is warranted. DecaBDE exposure can result in adverse effects to reproductive health and output in fish, earthworms, mice and rats as well as developmental- and neurotoxic effects in amphibians, rodents and humans. Globally up to about 90% of DecaBDE ends up in plastics, primarily in electronics, while the remainder ends up in coated textiles, upholstered furniture and mattresses. Technically feasible, cost-effective, alternatives are available for these uses and companies are already moving away from the substance. Non-chemical alternatives including techniques such as re-design that meet functional requirements are preferable. No recycling exemption should be recommended for DecaBDE since recycling of materials containing it will inevitably result in wider human and environmental contamination and dispersal of PBDEs. In addition, a recycling exemption would provide a loophole for export of DecaBDE-containing materials to developing countries that do not have the infrastructure to deal with it. The most effective control measure is listing DecaBDE in Annex without exemptions.

> DecaBDE should be recommended for listing in Annex A with no specific exemptions.

### Dicofol

Dicofol is persistent under acidic conditions such as are found in the Arctic and a number of lakes and watersheds. It is sufficiently persistent to be transported via riverine input to the open sea and to remote regions. Reported  $\log K_{ow}$  values of up to 6.06 are supported by bioconcentration factors of up to 10,000 from experimental data. Estimated half-lives in air are 3.1-4.7 days confirming dicofol's potential for long-range transport. Dicofol is a potential source of on-going DDT contamination. There is evidence of endocrine, immune, neurotoxic and reproductive effects and limited evidence of cancer. Dicofol disrupts reproductive function in birds.

> Dicofol meets the Annex E criteria and should move forward to Annex F evaluation.

### Short-chained chlorinated paraffins (SCCPs)

SCCPs levels in Arctic biota (including fish, seabirds, seals, walrus, and whales) are at levels comparable to known POPs indicating widespread contamination. These animals serve as food for northern Indigenous Peoples. SCCPs disrupt endocrine function and are suspected to cause cancer in humans. SCCPs are toxic to aquatic organisms at low concentrations. Upper bound exposure concentrations exceed "acceptable" exposure levels. Considering SCCPs' demonstrated long range transport and ability to accumulate, there is potential for increases in environmental levels should releases continue or increase. The POPRC has already agreed that SCCPs meet Convention criteria for persistence, bioaccumulation, long range transport, and toxicity.

> SCCPs meet the Annex E criteria and should move forward to Annex F evaluation.

### PFOA

PFOA is so persistent there are no measurable environmental half-lives. Assessment of bioaccumulation requires consideration of its properties. Since PFOA emulsifies the octanol and water surface interface,  $\log K_{ow}$  values are either not measurable or suspect. In addition, like PFOS, PFOA accumulates through a protein binding bioaccumulation mechanism not fat partitioning. Data examining trophic biomagnification and monitoring of humans indicates that PFOA bioaccumulates. The high prevalence of PFOA in many environmental compartments in the Arctic (particularly water, ice and snow) and its atmospheric half life exceeding two days

indicates that PFOA meets the screening criterion for long-range transport. PFOA disrupts endocrine function in fish and causes a variety of tumors in rodent studies. In humans, PFOA increases cholesterol levels; disrupts thyroid function; shows a dose-related increase in both kidney and testicular cancer; and is transferred to the fetus through the placenta and to infants via breast milk.

> PFOA meets Annex D screening criteria should move forward to a more comprehensive examination of POPs properties in Annex E evaluation.

### **Hexachlorobutadiene**

COP7 requested the POPRC to consider additional information related to a proposed listing in Annex C and then make a recommendation about the listing for consideration at COP8.

> The POPRC should establish an intersessional working group to undertake the activities requested of the Committee by COP7 in decision SC-7/11.

### **PFOS evaluation and alternatives**

POPRC10 decided that the guidance on PFOS alternatives should be revised to incorporate information contained in the assessment of alternatives and the document examining PFOS in open applications. The updated guidance would be submitted for consideration at COP8.

> The POPRC should establish an intersessional working group to undertake the activities updating the PFOS guidance as outlined at POPRC10 in decision POPRC-10/5

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