

Quick Guide to IPEN Views on POPRC10

October 2014

Pentachlorophenol and its salts and esters (PCP)

The POPRC determined at its ninth meeting that PCP and PCA are likely, as a result of their long-range environmental transport, to lead to significant adverse human health and/or environmental effects, such that global action is warranted (Decision POPRC-9/3). PCP is found in human breast milk, blood, amniotic fluid, adipose tissue, and seminal fluid, throughout the world, including peoples of the Arctic. Exposure to PCP is associated with neurodevelopmental impairment in children, thyroid disruption, and increased risk of non-Hodgkin lymphoma.

The Draft Risk Management Evaluation (RME) needs clarity about PCP alternatives, objective framing, and an unambiguous discussion of issues related to listing. The RME indicates that 18% of global PCP use is in India and 83% is in North America – in one Party (Canada) and one Observer country (USA). Both countries import the substance from the Mexican branch of US-based KMG Chemical. UN Comtrade data indicate that in 2013, nearly 7 million kg of PCP were imported with 9% of the imported PCP going to Canada and 91% to the USA. In essence, the vast majority of current PCP use is taking place in a single developed country Observer. The RME identifies wood treatment for utility poles and cross-arms as the primary use of PCP where it functions as an insecticide and fungicide. The toxicity of PCP and chemical alternatives to PCP points toward safer substitution with non-chemical alternatives. These include naturally resistant hardwoods, concrete, steel, and fibreglass reinforced composite. Non-chemical alternatives require less maintenance and have a longer service life. Industries making these alternatives appear ready for substitution and they have been implemented in countries currently using PCP.

Since almost all Parties have already eliminated PCP and technically feasible cost effective alternatives are currently available, the Committee should recommend a listing in Annex A. The release of dioxins and furans during the manufacturing, use, and disposal of PCP-treated wood should be covered by also listing PCP and its related compounds in Annex C.

> PCP and its related compounds should be recommended for listing in Annex A and Annex C with no specific exemptions.

DecaBDE

DecaBDE is extensively used as an additive flame retardant, particularly in plastics used in electronics. As a result, it is one of the most prevalent PBDEs in the global environment and one of the predominant PBDEs in Arctic air and deposition samples. DecaBDE is very persistent with reported environmental half-lives in sediment and soil typically exceeding 180 days and an atmospheric half-life estimated at 94 days and possibly exceeding 200 days. Debromination of DecaBDE in environmental matrices and biota to more persistent, toxic and bioaccumulative PBDEs including those already listed under the Stockholm Convention is considered to be of concern in a number of assessments. Despite initial claims that it was too big, DecaBDE bioaccumulates (BMF>1) in both aquatic and terrestrial species and it is found in elevated concentrations in top predators. Toxicity studies provide evidence for potential adverse effects to reproductive health and output in a number of species as well as developmental and neurotoxic effects. DecaBDE and/or its degradation products may also act as endocrine disruptors and affect thyroid hormone homeostasis. There is concern that DecaBDE and other PBDEs may act in combination, in an additive or synergistic manner and induce developmental neurotoxicity in both humans and wildlife at environmentally relevant concentrations

> DecaBDE meets Annex E criteria and should move ahead to Annex F evaluation.

Dicofol

At POPRC9 the Committee agreed that dicofol met the Annex D screening criteria except for a single Member. The information provided in POPRC10/4 indicates that the Annex D criteria are met: 1) The half life in water at pH common in the Arctic and in certain other ecological areas is 85 days, and in aerobic soils is 313 days; 2) Bioconcentration factors of over 10,000 have been measured in fish; 3) Measured K_{ow} ranges from 4.08 to 5.02; and 4) Dicofol shows high toxicity to aquatic organism in addition to other adverse effects including reproductive toxicity in birds and mammals, and endocrine disrupting effects. In addition dicofol can contain DDT, a substance already listed in the Stockholm Convention.

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

PFOS evaluation and alternatives

The POPRC's work on PFOS uses by Parties and alternatives is critically important to both phasing-out PFOS and providing information to countries on substitutes.

> The assessment of alternatives to PFOS should be submitted to COP7 and work should continue on the PFOS alternatives guidance at POPRC11. The Evaluation of Information (INF10) would benefit from including analysis from the other POPRC documents including the POPRC work on PFOS in open applications.

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