

CRC-10/3: Polychlorinated naphthalenes

The Chemical Review Committee,

Recalling Article 5 of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade,

Having reviewed the notifications of final regulatory action for polychlorinated naphthalenes submitted by Japan and Canada,¹

1. *Concludes* that the notification of final regulatory action for polychlorinated naphthalenes submitted by Canada meets the criteria set out in Annex II to the Convention;
2. *Adopts* the rationale for the Committee's conclusion on the notification for polychlorinated naphthalenes submitted by Canada set out in the annex to the present decision;
3. *Notes* that as only one notification of final regulatory action in respect of polychlorinated naphthalenes meets the criteria set out in Annex II to the Convention it will take no further action with regard to those substances at the current time.

Annex to decision CRC-10/3

Rationale for the conclusion by the Chemical Review Committee that the notification of final regulatory action submitted by Canada in respect of polychlorinated naphthalenes meets the criteria of Annex II to the Rotterdam Convention

1. In reviewing the notification of final regulatory action by Canada to ban polychlorinated naphthalenes as industrial chemicals, together with the supporting documentation provided by Canada, the Committee was able to confirm that the final regulatory action had been taken to protect the environment. The notification from this party was found to meet the information requirements of Annex I to the Rotterdam Convention.

2. The notification and supporting documentation were made available to the Committee for its consideration in documents UNEP/FAO/RC/CRC.10/5 and UNEP/FAO/RC/CRC.10/INF/9.

(a) Scope of the notified regulatory action

3. The final regulatory action relates to polychlorinated naphthalenes (PCN) with the molecular formula $C_{10}-H_{8-n}Cl_n$ $n > 1$. It was taken for the category "industrial chemicals" to protect the environment. It states that all manufacture, use, sale, offer for sale or import of polychlorinated naphthalenes, or a product containing them, is prohibited unless PCN are incidentally present. The prohibition on manufacture, use, sale, offer for sale or import of PCN or products containing them does not apply if they are to be used in a laboratory for analysis, in scientific research or as a laboratory analytical standard (UNEP/FAO/RC/CRC.10/5, annex II, sect. 2.2.1). The ban of PCN is published under the Prohibition of Certain Toxic Substances Regulations, 2012, Canada Gazette, Part II, Vol. 147, No.1, 2 January 2013.

(b) Annex II paragraph (a) criterion

(a) Confirm that the final regulatory action has been taken in order to protect human health or the environment;

4. The Committee confirmed that the final regulatory action had been taken to protect the environment.

5. PCN have been used as industrial chemicals in applications such as cable insulation,

¹ UNEP/FAO/RC/CRC.10/5, UNEP/FAO/RC/CRC.10/INF/8, UNEP/FAO/RC/CRC.10/INF/9.

capacitors, gauge and heat exchange fluids, instrument seals, solvents and other uses. Domestic Substances List data (1984-1986) indicate that PCN were used for organic chemicals, abrasives, polymers and components of plastic and synthetic resins (UNEP/FAO/RC/CRC.10/5, annex II, sect. 2.3.1).

(c) Annex II paragraph (b) criteria

(b) Establish that the final regulatory action has been taken as a consequence of a risk evaluation. This evaluation shall be based on a review of scientific data in the context of the conditions prevailing in the Party in question. For this purpose, the documentation provided shall demonstrate that:

- (i) Data have been generated according to scientifically recognized methods;*
- (ii) Data reviews have been performed and documented according to generally recognized scientific principles and procedures;*

6. The evaluation involved analysing available information about PCN. Various pieces of scientific and technical information have been examined and conclusions have been developed based on the weight of the evidence and the application of the precautionary principle.

7. The presented physico-chemical data are from International Programme on Chemical Safety (IPCS) or peer-reviewed publications. Environmental distribution was predicted with level III fugacity modelling. Atmospheric half-life estimations were calculated using AOPWIN (the Syracuse Research Corporation computer programme). Experimental data (from peer reviewed publications such as IPCS and other literature) and predicted data (e.g., BIOWIN 2000, ECOSAR) of biodegradation, bioaccumulation and toxicity are available. Environmental concentrations (air, water, biota, etc.) measured in Canada including the Canadian Arctic region and other regions are from peer-reviewed journals.

8. Thus, the Committee established that the data reviewed for the risk evaluation were generated according to scientifically recognized methods and that the data reviews were performed according to generally recognized scientific principles and procedures.

- (iii) The final regulatory action was based on a risk evaluation involving prevailing conditions within the Party taking the action;*

9. The risk evaluation took into account the conditions prevailing in Canada since it was based on both hazard and exposure data collected in Canada or data generated by calculations. It was based on the weight of the evidence: PCN is a substance that is highly persistent and bioaccumulative; when taken together with the potential for environmental release or formation and the potential for toxicity to organisms, there is a significant indication that it may be entering the environment under conditions that may have harmful long-term ecological effects. Substances that are persistent remain in the environment for a long time after being released, increasing the potential magnitude and duration of exposure. Substances that have long half-lives in mobile media (air and water) and partition into these media in significant proportions have the potential to cause widespread contamination. Releases of small amounts of bioaccumulative substances may lead to high internal concentrations in exposed organisms. Highly bioaccumulative and persistent substances are of special concern, since they may biomagnify in food webs, resulting in very high internal exposures, especially for top predators.

10. The risk evaluation was also based on evidence that PCN may be harmful to aquatic organisms at low concentrations, as well as to mammals at low doses. Therefore the Committee concluded that this criterion was met.

(d) Annex II paragraph (c) criteria

(c) Consider whether the final regulatory action provides a sufficiently broad basis to merit listing of the chemical in Annex III, by taking into account:

- (i) *Whether the final regulatory action led, or would be expected to lead, to a significant decrease in the quantity of the chemical used or the number of its uses;*

11. The notification of final regulatory action states that all use, sale, offer for sale or import of PCN, or a product containing them, is prohibited by the final regulatory action, unless the toxic substance is incidentally present, and therefore is expected to lead to a significant decrease in the quantity of the chemical used (UNEP/FAO/RC/CRC.10/5, annex II, sect. 2.1, 2.2.1, 2.3.1).

- (ii) *Whether the final regulatory action led to an actual reduction of risk or would be expected to result in a significant reduction of risk for human health or the environment of the Party that submitted the notification;*

12. It is expected that since the regulatory action to ban the use of PCN significantly reduces the quantity of the chemical used, the risks to human health and the environment will also be significantly reduced.

- (iii) *Whether the considerations that led to the final regulatory action being taken are applicable only in a limited geographical area or in other limited circumstances;*

13. In the supporting documentation (UNEP/FAO/RC/CRC.10/INF/9, pp. 7–9) reference is made to PCN being detected in environmental samples from various countries (Canada, Germany, Japan, the United Kingdom of Great Britain and Northern Ireland). Furthermore, the presence of PCN in the Arctic and Antarctic regions suggests that long-range atmospheric transport of PCN is occurring (UNEP/FAO/RC/CRC.10/INF/9, pp. 10 and 11). The task group concluded that the considerations that led to the final regulatory action being taken were applicable to a wide geographical area and circumstances.

- (iv) *Whether there is evidence of ongoing international trade in the chemical;*

14. In the supporting documentation it is indicated that Wellington Laboratories of Guelph, Ontario, is a supplier of PCN standard materials for analytical purposes (p. 6, “Manufacture and import”).

15. The entries in the European Chemicals Agency (ECHA) C&L inventory and the fact that pre-registrations have been submitted to ECHA indicate at least that PCN are of certain interest for European Union companies. Furthermore, a PCN commercial product, Halowax can still be purchased via the internet. The octa-CN product Halowax 1051, for example, can be bought from several global suppliers (UNEP/POPS/POPRC.9/13/Add.1, para. 42).

16. The notification states that the use of PCN is allowed for analysis, in scientific research or as a laboratory analytical standard (UNEP/FAO/RC/CRC.10/5, sect. 2.2.1).

(e) **Annex II paragraph (d) criterion**

(d) Take into account that intentional misuse is not in itself an adequate reason to list a chemical in Annex III.

17. There is no indication in the notification that concerns about intentional misuse prompted the regulatory action.

(f) **Conclusion**

18. The Committee concluded that the notification of final regulatory action by Canada related to the industrial uses of polychlorinated naphthalenes met the criteria set out in Annex II to the Convention.