

Report of the Chemical Review Committee on the work of its fifth meeting

Annex III

Rationales for those chemicals for which only one notification met the criteria of Annex II

C. Hexachlorobenzene: rationale for the conclusion that the notification for hexachlorobenzene (CAS No. 118-74-1) from Canada meets the information requirements of Annex I and the criteria of Annex II to the Rotterdam Convention

1. In reviewing the notification of final regulatory action for the severe restriction of hexachlorobenzene by Canada, together with the supporting documentation, the Committee was able to confirm that the action had been taken in order to protect human health and the environment.

2. The notification and supporting documentation identified hexachlorobenzene as an industrial chemical. It was used directly in the manufacture of pyrotechnics and tracer bullets and as a fluxing agent in the manufacture of aluminum. It was also used as a wood-preservative agent, a porosity-control agent in the manufacture of granite anodes and a peptizing agent in the production of nitroso compounds and rubber tyres.

3. The Committee established that the final regulatory action had been taken on the basis of a risk evaluation and that the evaluation had been based on a review of scientific data. The available documentation demonstrated that the data had been generated in accordance with scientifically recognized methods and that the data reviews had been performed and documented in accordance with generally recognized scientific principles and procedures. It also showed that the final regulatory action had been based on chemical-specific risk evaluations taking into account the conditions of exposure within Canada.

4. Regarding human health, exposure to hexachlorobenzene causes a wide range of effects in several species of mammals. For example, the carcinogenicity of hexachlorobenzene has been assessed in several bioassays in rats, mice and hamsters. Results from a number of studies have indicated that hexachlorobenzene is a co-carcinogen or promoter of cancer. In studies conducted by Canada, relatively low doses of hexachlorobenzene affected the reproductive tissues in female monkeys. Based on the most representative concentrations of hexachlorobenzene in air, water, food and soil, and standard values for body weights and intakes of these environmental media, the daily intakes of hexachlorobenzene were estimated for various age classes of the general population. In addition, estimates were made for more highly exposed subgroups of the population, including recreational fishermen who consumed salmon from Lake Ontario and Inuits from the high Arctic who consumed large quantities of marine mammals. Exposure of population in the vicinity of industrial sources may also have been greater than general population. The data presented indicated that hexachlorobenzene, at the concentration found in Canada had the potential to cause adverse effects on human health.

5. Regarding the environment, the highest concentrations of hexachlorobenzene were observed near point sources on the Great Lakes and connecting channels. Levels in air, water and forage fish from this area at the time when the assessment was conducted have the potential to cause harmful effects to fish-eating mammals, such as mink. The available data on these levels further indicated that hexachlorobenzene has the potential to cause reproductive impairment to predatory bird species across Canada, including endangered peregrine falcon.

6. The Committee concluded that the final regulatory action taken by Canada on the basis of the available supporting documentation provided a sufficiently broad basis to merit including hexachlorobenzene in Annex III to the Rotterdam Convention as an industrial chemical. It noted that the action had led to a decrease in the quantities of the chemical used in the notifying Party, because all

commercial use of hexachlorobenzene had been banned. Hence, the risk for human health and the environment in the notifying Party had been significantly reduced.

7. The Committee took into account that the considerations underlying the final regulatory action were not of limited applicability since hexachlorobenzene was subject to long-range transport and persistent and could therefore be found in areas where it has never been used.

8. The Committee noted that the final regulatory action was not based on concerns about intentional misuse of hexachlorobenzene.

9. At its fifth session, the Committee concluded that the notification of final regulatory action by Canada met the information requirements of Annex I and the criteria set out in Annex II to the Convention. When a second notification for the same chemical from a Party in a region other than North America is found by the Committee as meeting the criteria of Annex II, the Committee will recommend to the Conference of the Parties that hexachlorobenzene be included in Annex III to the Rotterdam Convention.
