process of planning new research and reviewing its risk assessment methods so that it can better evaluate how these residues affect children.

b. *Dietary exposure.* The NAS Report raised a concern about children's exposure to pesticide residues in the diet. As noted in unit II.C.2. of this document, EPA will propose that the use of propoxur in food handling establishments will be cancelled in the near future.

c. *Non-dietary exposure.* The NAS Report also pointed out that non-dietary sources of pesticides should be considered when estimating total exposure of children. The propoxur exposure assessment considers children and infant's exposure explicitly in assessing post application exposure. For example, the post application exposure assessment considered, for both infants and children separately, different ratios of skin to body weight, different respiratory volumes, and different times spent in a treated house. In terms of the propoxur exposure assessment, a question may be raised about children's exposure to residues from ingested household dust, pets wearing flea collars, or sprayed pets. Presently, EPA does not have a methodology for measuring ingested household dust. EPA believes exposure from flea collars is primarily inhalation, this source of exposure is captured in the exposure assessment, and the risk is small ($10^{-8}$). Children's exposure to pets treated with aerosol sprays has not been specifically measured. However, the pet owner applicator exposure assessment assumes pets will be treated four times per year for every year of a 70–year lifetime. EPA believes it is unlikely that children will be routinely treating household pets for fleas, and thus believes this exposure estimate is very conservative.

For the future, EPA is initiating a residential research strategy to support development of exposure monitoring and assessment of test guidelines, based on the unique behavior of infants and children, including dermal contact with treated surfaces, hand-to-mouth contact, and object-to mouth contact as well as other modes of exposure. The goal is to develop comprehensive guidelines for assessing exposure to pesticides both inside residences and in other settings, such as yards. EPA would like to set appropriate times for returning to treated residences. The research strategy will also compare exposures of the suburban child and the inner city child who may be exposed to structural pesticide residues carried by ventilation systems. EPA is also working with industry to establish a Task Force to conduct studies and collect more data on residential exposures.

d. *Children's risk.* Overall, EPA believes the conservative assumptions built into the hazard and exposure assessments have given good estimates of risk to the general population, and in so doing have also been protective of children. EPA is planning additional research in this area. If, in the future, based on new data or methodologies, the risk picture changes, EPA will reconsider this proposed decision not to initiate this Special Review.

### *D. Unsupported Uses, Risk Reduction, and Amendments to DCIs*

No registrant of propoxur end-use products committed to generate trigger pump sprayer data in response to the 1992 DCI. EPA believes that the liquid is likely to drip from the sprayer onto the applicator's fingers, and without data, this exposure and risk cannot be quantified and could be of concern. Accordingly, registrants have either voluntarily cancelled this use pattern or have amended their labels to delete use of ready-to-use liquids with trigger pump sprayers.

## IV. Comments Received on the Preliminary Notifications

*Comment.* In a letter dated March 22, 1988, EPA notified the registrants that it was considering a Special Review of propoxur based on carcinogenicity concerns and the estimated risks posed to PCOs and the general public. In responses dated April 26, 1988 and May 16, 1988, Miles Inc. stated that it already has committed to support the continued registration of propoxur products in response to the 1987 DCI; that EPA should consider all data before deciding on initiating a Special Review of propoxur; and that the bladder carcinogenic effect was species-specific for the rat and Miles Inc. would provide additional data to support its claim. Miles Inc. also urged the Agency not to initiate its Special Review of propoxur without first reviewing the data to be generated by Miles Inc. to satisfy the data requirements outlined in the 1987 propoxur DCI. Also, Miles Inc. suggested that EPA review its cancer classification of propoxur as a Group B2 carcinogen.

*Response.* EPA has concluded its review of the studies submitted by Miles Inc. to comply with the 1987 DCI. The effects of the voluntary cancellation of and label amendments deleting use of RTU liquids with trigger pump sprayers were considered. EPA has determined that the risks to PCOs and the general public for the remaining registrations of propoxur are likely to present negligible short-term or long-term human risk. In addition, the registrant has submitted some additional information relating to the carcinogenicity of propoxur. When all the requested data has been submitted, EPA will reconvene a peer review panel to review all the carcinogenicity data relating to propoxur.

## V. EPA's Proposed Decision Regarding Special Review

EPA notified propoxur registrants in 1988 that the Agency was considering a Special Review of propoxur. Because of propoxur's Group B2 (probable) human carcinogen classification and wide-spread uses of the pesticide in homes, EPA was concerned with the potential long-term health hazards from prolonged exposures associated with the application of certain indoor formulations. However, since then, EPA has refined the risk assessment. In addition, registrants have cancelled those product registrations and deleted or amended label uses for which EPA had risk concerns. For these reasons, the Agency now concludes that the remaining uses of propoxur products are likely to present negligible short-term or long-term human risk. Therefore, the Agency is proposing not to initiate a Special Review of propoxur at this time.

EPA based its regulatory decision on propoxur entirely on the available information in its exposure database and the result of its risk assessments, which are based on conservative assumptions and the conservative linearized multi-stage model of carcinogenic potency. EPA has concluded that it can issue this regulatory decision in the absence of more conclusive data to resolve the question of diet and species specificity of propoxur in inducing bladder effects in animals, or to resolve the issue on propoxur's suggested activity as a non-genotoxic or ''threshold'' carcinogen. The Agency believes that the issues surrounding the mechanism of carbamate-induced carcinogenicity are complex, and may be a subject of considerable scientific debate for the future.

## VI. Executive Order 12898 on Environmental Justice

In accordance with the Executive Order on Environmental Justice, EPA has reviewed this proposed decision and found it does not result in any adverse environmental effects (including human health, social and economic effects) on minority communities and low-income communities.