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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 27 1990

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: Applicator and Occupant Exposure to Bifenthrin
during Experimental Use as a Termiticide (HED
Intra #0049)

TO: David Liem
Toxicology Branch/Section II
Health Effects Division (H7509C)

FROM: Curt Lunchick, Acting Section Head *Curt Lunchick*
Environmental Chemistry Review Section
Non-Dietary Exposure Branch/HED (H7509C)

THRU: Charles L. Trichilo, Ph.D., Chief
Non-Dietary Exposure Branch/HED (H7509C) *CL Trichilo*

The Non-Dietary Exposure Branch has reviewed the experimental use permit for Biflex FT, a termiticide use of bifenthrin. Toxicology Branch II has stated that it would have no objection to issuance of the EUP provided the carcinogenic risk to applicators and occupants of treated buildings did not exceed 10^{-6} . Bifenthrin has been classified as a Category C carcinogen with an upper bound potency estimate of 5×10^{-2} (mg/kg/day)⁻¹.

NDEB does not have any data available to permit a quantification of exposure to bifenthrin from the termiticide use. The agricultural use estimates cannot be used directly since the application techniques are totally different. Despite this lack of data, one can be reasonably assured that risk will not exceed 10^{-6} . The highest exposure in the agricultural scenario was to the aerial open pour mixer/loader with an average daily exposure of 4×10^{-2} mg/kg/day. This estimate was based on the mixer/loader handling 220 lbs ai/day and 1100 lbs ai/year, assuming five uses per year. Toxicology Branch II estimated the risk to the mixer/loader to be 10^{-3} based on 30 years of exposure.

Under the EUP no more than 190 lbs ai will be used throughout the United States. In addition, the EUP is for one year or 1/30 of the duration assumed for mixer/loaders. Even if one individual applied all 190 lbs ai, very unlikely, the lifetime average daily exposure based on the worst agricultural

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estimate is 2×10^{-4} mg/kg/day with a risk of 1×10^{-5} from one year of use. Therefore NDEB concludes that applicator risk will not exceed 10^{-6} for the EUP. Post application exposure is typically much less than exposure to an applicator.

NDEB is concerned, however, about lifetime risks from termiticide use of bifenthrin should a FIFRA Section 3 registration be granted. Therefore, NDEB requests that the Registration Division require the registrant, FMC, to monitor dermal and inhalation exposure to applicators and residents of treated structures during the EUP. These data will be required to support the registration of Biflex FT termiticide.

cc: G. LaRocca, PM15/RD (H7505C)
E. Saito, SACB
Bifenthrin file
Correspondence file
Curt Lunchick