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

JUN 7 1995

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM:

SUBJECT: ISSUES CONCERNING RESIDENTIAL EXPOSURE TO SUMILARV®/NYLAR® WHEN USED INDOORS TO CONTROL FLEAS AND COCKROACHES

FROM: Tina Manville, Biologist
Special Review and Registration Section II

TO: Rick Keigwin/Joseph Tavano
PM Team 10
Registration Division

THRU: Mark I. Dow, Ph.D., Section Head
Special Review and Registration Section II

Larry C. Dorsey, Chief
Occupational and Residential Exposure Branch
Health Effects Division (7509C)

DP Barcode: D214046

Pesticide Chemical Code: 129032

EPA MRID No.: N/A

INTRODUCTION:

Registration Division (RD) has asked OREB to review the exposure report entitled "Evaluation of the Potential Health Risks Associated With Indoor, Non-food, Consumer Uses of Sumilarv" by Jeffrey H. Driver, Dr. P.H., and Gary K. Whitmyre of Technology Sciences Group Inc. The registrants Sumitomo Chemical Co., Ltd. and McLaughlin Gormley King Co., are seeking registration of end-use products with pyriproxyfen (Sumilarv®), a new active ingredient which is an insect growth regulator.

The above report addresses the registrants' estimates of consumer exposure to four different end-use product formulations for indoor flea, cockroach and crawling insect control. The

following products were assessed: 1) Nylar Pressurized Spray 2618, a 14 oz aerosol can product, containing 0.015% Sumilarv 2) Nylar Total Release Fogger 2620, a 6 oz. canister containing 0.1% Sumilarv, 0.4% permethrin, and 0.05% pyrethrins 3) Nylar-10 EC an emulsifiable concentrate containing 10% Sumilarv 4) Nylar Concentrate 2607, an emulsifiable concentrate containing 1.3% Sumilarv.

CONCLUSIONS/RECOMMENDATIONS:

OREB typically does not perform exposure assessments until a toxicological endpoint has been identified. However OREB has reviewed the subject submission and finds it unacceptable due to the following concerns.

The report would be more clear if each end-product formulation was assessed separately in different documents. All formulations should have labels for each form of packaging. The report contained a Nylar-10 EC label with directions for dilution and application by a low-pressure wand, but did not contain a label for a RTU hand-held spray container to which it assessed consumer exposure.

The authors seemed to only address inhalation exposure (except in their worst case scenario of post-application exposure to a baby). Inhalation is usually a small component of applicator and post-application exposure. PHED Version 1.1 data on aerosol can use indoors shows that inhalation exposure is only 0.5% of total exposure. OREB recommends the use of more PHED data for assessing applicator exposure, where applicable.

For the worst case scenario post-application exposure the authors estimated exposure to a baby sleeping and crawling on the floor after crack and crevice treatment for cockroaches. The exposure assessment was based on data from a post-application study done with chlorpyrifos by Vaccaro et al., 1991. OREB notes that data from the study are proprietary and may be subject to data compensation issues. The study is not applicable to the Sumilarv situation because post-application exposure estimates are chemical specific since they depend on such things as the rate of dissipation, dislodgeable residues on surfaces, and air concentrations.

cc: T. Manville
Chemical File: **Sumilarv (129032)**
Correspondence