Department of Pesticide Regulation

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SUBJECT: INSIGNIFICANT EXPOSURE ASSESSMENT FOR NIBAN PRODUCTS USED TO CONTROL ANTS, ROACHES, CRICKETS, AND SILVERFISH

Under review for exposure significance are six bait products from Nisus Corporation for use to control ants, cockroaches, crickets, and silverfish. The trade names, package sizes, and U.S. EPA registration numbers of these products are as follows: (1) Redzone Bait [EPA Reg. No. 64405-2-ZA, *net contents not specified*]; (2) NiBan™-FG Fine Granular Bait [EPA Reg. No. 64405-2-ZA, 4 lb-bag]; (3) NiBan™-FG Fine Granular Bait [EPA Reg. No. 64405-2-ZA, 1 lb-bag, *with label print date of 3/94* and *6/94*]; (4) NiBan™ Granular Bait [EPA Reg. No. 64405-2-AA, 5 lb-bag]; (5) NiBan™ Granular Bait [EPA Reg. No. 64405-2-AA, 40 lb-bag]; and (6) NiBan™ Granular Bait [EPA Reg. No. 64405-2-AA, 45 lb-bag]. All of these products contain 5% of orthoboric acid by weight as the active ingredient (AI).

This review continues to support the earlier conclusion that an appropriate respirator or dusk mask is required for applications in new construction or in places where the product can be dusted or broadcast liberally. Otherwise, the dermal as well as the total exposure in question would be considered insignificant, in part because the dermal absorption for boric acid was determined previously to be very low, about 1% for intact skin (e.g., Formoli, 1995). The type of application equipment normally used (e.g., mechanical spreader) for this bait, together with the low AI content and normal work clothing, also ensures that the maximum daily usage can be as much as 30 acres or more per applicator (*see* Dong, 1999 for estimation of daily usage for a similar product).

The reason for the respirator requirement was given in earlier reviews for a similar borate product distributed also by the same company (Dong, 2000a, 2000b). Although the bait products under current review contain much less (by 20-fold) borate AI per unit of product than that of the similar product considered earlier, nuisance dust and the potential irritation effects from the other (inert) ingredients are still of health concern justifying the use of a respirator. The respirator requirement may be waived if it is beyond the purview of this review to consider the potential nuisance or irritation effects of fine particles accompanying these granular products.

The respirator requirement is intended for the above bait products *as a group* by their respective registration number. Otherwise, because of their small package size, some of the products listed above (e.g., the 2nd through 4th products) are likely to be applied in very small amounts (for small operations) each day by a single user. Although the last three products (those under EPA Reg. No. 64405-2-AA) are not *fine* granules that can or should be applied with a power duster, potentially a considerable amount of the inhalable fine particles could still be dusted off to the

breathing zone during application with a mechanical spreader. Ironically, the labels for all but the first (a *fine* granular) product (Redzone Bait) already require the use of a dust mask or respirator.

Residential exposure to the bait, especially that of children, is considered insignificant in that the use directions on all the labels are sufficient to limit a resident's access to the bait. Of note is that the Redzone label contains the precautionary statement that "*Children and pets should not be in the treatment are(a) until after application is completed*." This statement appears to be somewhat irrelevant, misleading, or inconsistent with the rest of the use directions specified on that product label regarding children's access to the bait.

References

Dong MH, 1999. Review of Data Waiver for Gro-Lyfe™'s Sodium Metaborate Product Used as a Herbicide. Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation, dated March 25.

Dong MH, 2000a. Insignificant Exposure Assessment for NiBor-D™ (Disodium Octaborate Tetrahydrate). Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation, dated April 17.

Dong MH, 2000b. Reconsideration of Insignificant Exposure for NiBor-D™ (Disodium Octaborate Tetrahydrate). Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation, dated March 3.

Formoli T, 1995. *Document Review*: Dosimetry Study for Rx For Fleas Plus: Toxicology Review, Exposure Assessment, Risk Characterization. HSM-95002. Worker Health and Safety Branch, Cal/EPA Department of Pesticide Regulation.

cc: Joseph P. Frank, D.Sc.