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MEMORANDUM

SUBJECT: Update of Incident Data on Chlorpyrifos for Domestic Animals

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Background

A review and analysis of the incident reports on domestic animals for Chlorpyrifos was conducted in 1995 (Memo dated January 23, 1995 from Virginia Dobozy to Bruce Kitchens). Incidents in dogs and cats were categorized as exposure by direct applications (flea and tick dips, sprays, collars, etc.) or by premise applications (household and lawn treatments). The analysis found that the majority of the incidents in domestic animals involved cats, although the chemical is registered only for use in flea collars for this species. Cats which were exposed to products registered only for use on dogs, mainly dips, experienced a high incidence of death (30%). There was also evidence of misuse of premise treatment products, including practices such as applying these products directly to animals and not removing pets from premises during applications.

Update to 1995 Memo

In 1996, the draft PR Notice mentioned in the 1995 review was finalized and published as PR Notice 96-6. Under this notice, labels for all products administered directly to animals were revised to assure adequate directions for use and warning information was provided.

In 1997, DowElanco announced the establishment of a ten-point program to further the safe use of Dursban insecticides (active ingredient, chlorpyrifos). Under this plan, the registrant withdrew its registrations for indoor broadcast flea control and direct application pet care products, except for flea collars, and committed to expedite implementation of PR Notice 96-6 on pet products. Since 1995, there has been an evolution in flea and tick control treatments, with three products containing new active ingredients now being the most widely used. One of these products is orally administered and as such is regulated by the Center for Veterinary Medicine, Food and Drug Administration. The other two are spot-on preparations and sprays registered by EPA. These three products are either by regulation (FDA) or company policy sold only through veterinarians. Spot-on preparations have also become popular for general distribution products (sold in pet stores, grocery stores, etc.) that contain older chemicals (e.g., permethrin).

Incident Reports Since 1995

The incident reports for domestic animals involving chlorpyrifos in the Incident Data System were tabulated for the years 1996 through 1998. Due to time constraints, a complete analysis of the data could not be conducted. However, general impressions are provided in this memo. One impression is that there has been a shift in the percentage of incidents resulting from exposure to products registered for direct use on animals as compared to the percentage of incidents resulting from premise exposure. The former has decreased and the latter increased. The number of incidents per year and the number attributed to pet products are presented below.

Year	Number of Incidents	Number of Incidents Attributed to Pet Products (%)
1996	130	10 (8%)
1997	123	8 (7%)
1998	63	8 (13%)

In the 1995 review, approximately 32% of the 277 incidents involved products registered for direct application to dogs and cats, approximately 61% involved exposure of dogs and cats through premise treatments, and approximately 8% involved other domestic animals. The reason for this perceived shift are unknown. The same data limitations as described in the 1995 Memo are also applicable now.

Another general impression is that deaths are still being reported, with more occurring in cats than other species. The exact number on an annual basis cannot be determined without a detailed analysis of the incident reports.

Conclusions/Recommendations

1. The cancellation of indoor broadcast flea control applications and products for direct application to dogs and cats should reduce the risk of serious adverse reactions and deaths in these animals. The time required to eliminate all chlorpyrifos products registered for direct use on animals from store shelves cannot be predicted. Therefore, it may be premature to review the IDS reports for evidence that these actions were effective.

2. Labels for premise applications should contain instructions to remove pets from the area during treatment and until the area is dry. This applies to both indoor and outdoor applications of chlorpyrifos.