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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

Memorandum

SUBJECT: Memorandum of Conference held 2/9/82 for proposed amended registration of Safrotin EC to permit an outdoor use (Reg. No. 11273-22).

FROM: James Felkel, Wildlife Biologist
Ecological Effects Branch
Hazard Evaluation Division (TS-769) J. Felkel

TO: Clayton Bushong, Chief
Ecological Effects Branch
Hazard Evaluation Division (TS-769)

Time/Location: 10:45 A.M.
Rm. 211, CM#2

Attendees:

Susan Brotherton	Sandoz, Incorporated
Joanne Edwards	Registration Division, Team No. 16
Raymond Matheny	Hazard Evaluation Division/Ecological Effects Branch
James Felkel	Hazard Evaluation Division/Ecological Effects Branch
Sami Malak	Hazard Evaluation Division/Environmental Fate Branch

The purpose of this meeting was to discuss data gaps in support of the above-described amended registration. Mr. Felkel summarized EEB's 10/1/81 Review (attached). No further studies are needed at this time to assess the acute toxicity of Propetamphos (the active ingredient of Safrotin EC) to non-target organisms. The material is highly toxic to birds (lowest acute oral LD_{50}=45 mg/kg; lowest dietary LC_{50}=138 ppm), moderately toxic to mammals (rat acute oral LD_{50}=82.8 mg/kg), highly toxic to fish (lowest trout LC_{50}=0.36 ppm; lowest bluegill LC_{50}=0.13 ppm), and very highly toxic to aquatic invertebrates (lowest aquatic invertebrate LC_{50}=0.00068 ppm). However, an application rate, needed to assess exposure, was not provided on the proposed label. Ms. Brotherton agreed to develop a label statement that would specify how much product is to be applied per unit area in a band around buildings.

Mr. Felkel explained that, while the proposed use is not a major one in terms of overall acreage and direct contamination of water bodies is unlikely since the perimeter treatment would be by hand and by certified applicators, there is still a potential for chronic exposure of non-target organisms. Repeat applications are proposed (Ms. Brotherton indicated that the maximum number of applications per year would likely be 12, in

cases where customers had contracts for monthly treatments), Propetamphos has bioaccumulation potential (octanol/water partition coefficient >100,000; solubility in water is 110 ppm at 24°C), and there is a potential for aquatic persistence should the material reach water bodies (hydrolytic half-life of 370 days at pH 5, 570 days at pH 9; the photolytic half-life is approximately 5 days).

An application rate and terrestrial half-life data would enable EEB to assess the likelihood of chronic exposure to terrestrial organisms. An application rate and an estimate of runoff potential by EFB would enable EEB to assess the likelihood of chronic exposure to aquatic organisms. EEB has deferred to EFB regarding the specific environmental chemistry tests needed. If a chronic exposure of non-target organisms is likely, chronic hazard testing may be needed to assess this exposure.

Mr. Malak indicated that the proposed pesticide use fits the EFB category "domestic outdoor terrestrial use" and requires hydrolysis, aerobic soil metabolism, adsorption, and field dissipation (soil) data. Ms. Brotherton indicated that her firm is considering applying for a turf use of Safrotin EC. Mr. Malek indicated the additional testing specified by subpart D of proposed guidelines for such "non-crop terrestrial use" and said that EFB is sometimes able to waive specific tests on a case-by-case basis.

Ms. Brotherton asked whether there would likely be any additional fish and wildlife data needed for a turf use. Mr. Felkel indicated that, as with the present proposal, acute toxicity data needs have been met. If the proposed turf application rate and number of repeat applications were similar or greater than under the proposed perimeter use, the turf use would have a greater potential for chronic exposure than the perimeter use. As with the present proposal, environmental chemistry data is needed to fully assess the potential for chronic exposure. If such exposure is likely, chronic hazard testing may be needed to assess the effect on non-target organisms.