

US EPA ARCHIVE DOCUMENT

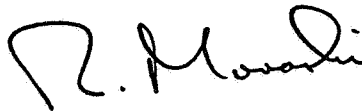
FILE

047802

Date Out EFB: 07 JUL 1983

TO: Stubbs/Housenger
Product Manager 42
TS-767

FROM: Dr. Richard Moraski
Acting Chief
Review Section No. 1
Exposure Assessment Branch
Hazard Evaluation Division



Attached please find the environmental fate review of:

Reg./File No.: 83-CA-76

Chemical: O-Isopropoxyphenyl-N-methylcarbamate (propoxur)

Type Product: Insecticide

Product Name: Baygon 70% WP

Company Name: CDFA

Submission Purpose: Review data to Section 18 emergency exemption
for use to control mosquitoes.

ZBB Code: Other

ACTION CODE: 510

Date in: 7/1/83

EFB # 3441

Date Completed: 7/6/83

TAIS (level II) Days

51

1.5

Deferrals To:

- Ecological Effects Branch
- Residue Chemistry Branch
- Toxicology Branch

1.0 INTRODUCTION

The California Department of Food and Agriculture (CDFA) has requested a Section 18 emergency exemption for the use of Baygon 70% WP (O-isopropoxyphenyl-N-methylcarbamate, as a. i.) for application over flowing water of the Kern River bottom flood area. This exemption is requested for control of mosquitoes, the vector of the encephalitis virus. The proposed effective date for use is July 1, 1983 to September 1, 1983.

Due to excessive winter rains and a record snowpack, 1,800 acres of river flood basin is being used for percolating excess water. The area, a designated bird sanctuary, consists of dense vegetation, native grasses, trees, and brush as well as aquatic vegetation such as cattails and tules.

The river flow that is not percolated passes through the area and is used for crop irrigation or passes into the California Aquaduct.

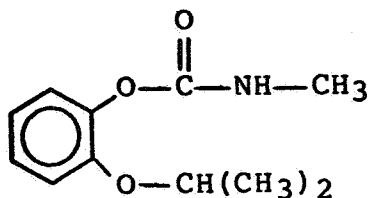
Baygon 70% WP is currently registered for use as (ground applied) mist spray for mosquitoes [1 to 1 1/2 oz. (0.05 to 0.07 lb. active) per acre] and as low volume (aqueous) spray or low volume oil spray for control of adult mosquitoes [1 to 4 oz. (0.05 to 0.175 lb. active) per acre] applied aurally.

Current label also bears the restrictions: "Keep out of lakes, streams, or ponds. Toxic to wildlife. Birds feeding on treated area may be killed."

1.1 Chemical

Chemical name: o-Isopropoxyphenyl-N-methylcarbamate

Chemical structure:



2.0 USE DIRECTIONS

Dosage: 0.10 pound product per acre.
Dilution rate: Apply with 0.5 gallon petroleum oil per acre*.
Application method: Aircraft
Frequency/Timing of Application: As needed at dusk or dawn.

*Oil dilution rather than aqueous is requested since it provides better sticking properties. (Communication with CDFA).

3.0 DISCUSSION OF DATA

- 3.1 No additional environmental fate data were included in the submission.
- 3.2 Review of EAB files indicate that significant data gaps exist for the data supporting the registration of Baygon for outdoor (terrestrial) uses.
- 3.3 Only acceptable data submitted previously include photolysis and leaching. All other data requirements have not been satisfied.
 - 3.3.1 O-Isopropoxyphenyl-N-methylcarbamate will photodegrade in the aqueous environment. Previous EAB review concluded that the projected photolytic (unsensitized) half-life is estimated to be about 13 days (adjusting the half-life estimate to compensate for effects of hydrolysis).
 - 3.3.2 Baygon is considered to be mobile in soils, being placed in class 4, "mobile," according to the Helling and Turner soil TLC classification.

4.0 RECOMMENDATION

- 4.1 Toxicology Branch and Ecological Effect Branch considerations permitting, EAB foresees no problems resulting from the issuance of the requested emergency exemption for the use of Baygon 70% WP (O-isopropoxyphenyl-N-methylcarbamate) for control of mosquitoes, vector for the encephalitis virus, in the Kern River flood basin.
- 4.2 EAB does express concern that the environmental fate of o-isopropoxyphenyl methylcarbamate has not been completely defined for this aquatic non-food crop use. Also, the use of petroleum oil as carrier could contaminate water used as potable water supplies.

However, the short duration of the exemption (July 1, 1983 to September 1, 1983) and the estimation by CDFA that 5% or less of the pesticide spray may reach the river channel (95% will cling to the vegetation) limit the environmental impact from the emergency use.

Similar mosquito control uses (albeit strictly terrestrial) at similar use rates are currently registered for Baygon 70% WP. EAB never reviewed the environmental fate of Baygon 70% WP relating to these uses.



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