File

028201

Date Out EFB: NOV 04 1985

To: G. Werdig
Product Manager 50
Registration Division (TS-767)

From: Samuel M. Creeger, Chief
Review Section No. 1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

Attached please find the environmental fate review of:

Reg./File No.: _____

Chemical: Propanil

Type Product: Herbicide

Product Name: _____

Company Name: Rohm and Haas

Submission Purpose: Request waivers under the GWDCI

Date In: 10/3/85

Action Code: 495

Date Completed: NOV 04 1985

EAB # 6020

Days
0.1

Deferrals To:

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

Monitoring study requested by EAB: ☐

Monitoring study voluntarily conducted by registrant: ☐

1. INTRODUCTION

The registrant, Rohm and Haas, is requesting waivers from the requirements of aqueous (161-2) and soil (161-3) photolysis studies required under the GWDCI for propanil. They justify these waiver requests on a UV/visible absorption spectrum for propanil in methanol (10 ppm concentration) showing propanil not to absorb light between 300 and 900 nanometers and to absorb light very weakly between 275 and 300 nanometers. Rohm and Haas claims to have run a methanol versus methanol baseline, but it was not included with the material routed to EAB.

2. DISCUSSION

The fact that propanil does not absorb light between 290 and 900 nanometers supports the request for a waiver from the requirement for an aqueous photolysis study since water (as the solvent) will not photodegrade forming compounds that would react with propanil (as the solute).

Soil, however, has been shown to absorb light resulting in the formation of singlet oxygen which in turn can react with compounds near the soil surface (Gohre and Miller, 1983). Therefore, the fact that propanil itself does not absorb light is not sufficient basis to support a waiver from the requirement of a soil photolysis study since an indirect phototransformation of propanil may occur.

3. RECOMMENDATIONS

I recommend waiving the requirement for the aqueous photolysis study (161-2) but not the requirement for the soil photolysis study (161-3).

Samuel M. Creeger
November 4, 1985
EAB/HED

Reference

Gohre, K. and Miller, G.C. Singlet Oxygen Generation on Soil Surfaces; J. Agric. Food Chem., 1983, 31, 1104-1108.