

US EPA ARCHIVE DOCUMENT

Shaugnessy Numbers: 057701
Date out of EFGWB: 6 March 1990

TO: Product Manager
Registration Division (H-7505C)
FROM: Catherine Eiden, Acting Chief, *C. Eiden*
Surface Water Section *2/27/90*
Exposure Assessment Branch/HED (H-7505C)
THRU: Henry Jacoby, Chief, *Henry Jacoby*
Environmental Fate and Groundwater Branch (H-7507C) *3/1/90*

Attached, please find the EFGWB review of:

Reg./File #: Correspondence Control# 16-752
Chemical Name: Malathion
Type Product: Insecticide
Company Name: American Cyanamid
Purpose: Request that spray drift studies
be set aside.

Date Received: 26 Aug 88 Action Code: 350
Date Completed: 26 Feb 90 EFGWB #(s): 80984

Monitoring Study Requested: No Total Reviewing Time: 2d

Monitoring Study Volunteered: No

No Deferrals to any other Branch

I. Chemical Description:

Malathion

II. Test Materials:

NA

III. Study Action Type:

Request for removal of spray drift requirements.

IV. Study Citations:

Letter of 27 June 1988 from Dr. Barbara Gingher of American Cyanamid to John Tice (RD, USEPA).

V. Reviewer:

Robert K. Hitch, Ecologist, Robert K. Hitch
Surface Water Section
Environmental Fate and Groundwater Branch

Date: 2/28/90

VI. Approval:

Catherine Eiden, Acting Chief, Catherine Eiden
Surface Water Section
Environmental Fate and Groundwater Branch

Date: 2/28/90

VII. Conclusions:

The registrant requests that spray drift requirements for malathion be set aside. This request is rejected. The registrant is to provide spray drift studies to satisfy §158.142. To plan the protocols for these studies it is recommended that the registrant determine which malathion use patterns are most likely to cause spray drift exposure to nontarget aquatic organisms and humans. Afterwards, the registrant should schedule two meetings to discuss protocols for spray drift studies at the chosen use pattern sites. One meeting should be with the Ecological Effects Branch and the other should be with the Nondietary Exposure Branch. The EPA Product Manager should be requested to invite the Environmental Fate Branch and Groundwater Branch to attend both meetings.

VIII. Recommendations.

NA.

IX. Background

The February 1988 Guidance for Reregistration of Malathion requires that Droplet Size Spectra and Drift Field Evaluation Studies (§158.142) be submitted. That document states that malathion is volatile and persistent in the air. It also states that human poisonings have occurred because of drift and that there is potential for impact on nontarget fish and wildlife due to drift. These are the reasons given for levying spray drift requirements.

X. Discussion

In her 27 June 1988 letter, Dr. Gingher requests that the requirement for spray drift studies be set aside. She cites the statement as on page four of the Guidance for Reregistration concerning 14 percent of the malathion human poisoning incidents being due to spray drift or other "coincidental exposure". She feels that this language does not clearly indicate that spray drift is a major cause of poisonings. Further she notes that the Agency has no acceptable laboratory volatility study (guideline 163-2) or photodegradation in air study (guideline 161-4). Given this lack of data, she wonders how the Agency can show concern for the volatility and persistence of malathion.

As noted in the Conclusions section, the Environmental Fate and Groundwater Branch finds that setting aside the spray drift requirements is not justified.

The spray drift study guidelines were not designed to measure revolatilization. Whether or not the Agency's concerns about malathion's possible tendency to volatilize and persist in air can be incorporated into the spray drift tests can be looked at as the spray drift study protocols are developed.

Mr. Jerome Blondell of the Nondietary Exposure Branch was contacted regarding the phrase "coincidental exposure". He assured me that, in using this classification, the State of California meant that most of that 14 percent was caused by spray drift.

I also talked with Mr. Curt Lunchick and Dr. Michael Firestone of the Nondietary Exposure Branch. They agreed that spray drift studies might be designed to help address exposure to human beings. They suggested that a meeting be set up with the registrant and members of the Nondietary Exposure Branch and the Environmental Fate and Groundwater Branch to plan a protocol to address human exposure concerns.

I discussed the spray drift requirements with Henry Craven of the Ecological Effects Branch. Mr. Craven states that his Branch's main concern is for nontarget aquatic organisms. Mr. Craven suggested a meeting with the registrants and EFGWB. He noted that his Branch would probably have no use for air monitoring data (which are generally collected during the Drift Field Evaluation study) since their main concern is for aquatics.

XI. Completion of One Liner

NA

XII. Confidential Appendix

NA