8-24-90

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

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM:

TO: Amy Rispen, Chief
Science Analysis and Coordination Staff
Environmental Fate and Effects Division (H7507C)

L. Rossi, Chief
Reregistration Branch
SRRD (H7505C)

FROM: Henry Nelson, Ph.D., Acting Section Head H Nelson
Environmental Chemistry Review #3
Environmental Fate and Groundwater Branch/EFED (H7507C)

THRU: Hank Jacoby, Chief
Environmental Fate and Effects Branch
Environmental Fate and Effects Division (H7507C)

DATE: August 24, 1990

The following is EFGWB's response to L. Rossi's August 14, 1990 memorandum to Hank Jacoby concerning the status of environmental fate data requirements for benomyl:

162-1. Aerobic Soil Metabolism: Study 41255801 has not been reviewed nor received by EFGWB.

162-2. Anaerobic Soil Metabolism: EFGWB (see EAB #70858 dated 12/24/87) concluded that an anaerobic soil metabolism study (Han 1986; no MRID provided but may be 40158401) did not satisfy the data requirement. In later correspondence with OPP (see EFGWB #80863 dated 9/14/88), the registrant indicated that they would attempt to satisfy the anaerobic soil metabolism study with an anaerobic aquatic metabolism study.

162-3. Anaerobic Aquatic Metabolism: Study 41137710 has not been reviewed. It was returned to RD by EFGWB under Policy Note 31 (see EFGWB #90702 dated 10/13/89).

162-4. Aerobic Aquatic Metabolism: Study 41291501 has not been reviewed or received by EFGWB.

163-1. Leaching and Adsorption/Desorption: Essentially correct but improperly worded. Based upon the supplemental information submitted by the registrant, EFGWB concluded that the additional requirement for data on the adsorption/desorption of benomyl to an aquatic sediment should be waived (see EFGWB #90-0276 dated 2/23/90). Study 259471 (EPA Ascension #) contains data on the adsorption/desorption of benomyl to various soils, but was previously judged to only partially satisfy the 163-1 data requirement due to a lack of sediment data. Due to the waiver of the requirement for sediment data in 3/90, the study is now considered to completely satisfy the 163-1 data requirement.

163-2. Lab Volatility: Correct. In a review dated 9/11/90, EFGWB (see EFGWB #80863) recommended that the lab volatility data requirement be waived. The waiver request was approved by SRRD in 11/88.

163-3. Field Volatility: Correct. In a review dated 9/11/90, EFGWB (see EFGWB #80863) recommended that the lab volatility data requirement be waived. The waiver request was approved by SRRD in 11/88.

164-1. Terrestrial (Soil) Field Dissipation: At least partially correct, possibly completely correct. In a review dated 9/11/90, EFGWB (see EFGWB #80863) recommended that the registrant be granted a time extension for submitting a 164-1 study from 10/89 to 10/90 (the time extension was approved by SRRD). However, we were unable to locate the study protocol approval in our files.

164-2. Aquatic Field Dissipation: Essentially correct except MRID numbers are mixed up. EFGWB (see EAB Nos. 5601 and 70858) initially concluded that study 00146415 (entitled "Field monitoring study for benomyl in flooded rice fields") did not satisfy the 164-2 data requirement. Study 41274801 that you refer to in your memo is a supplemental soil column leaching study that the registrant later submitted in support of the aquatic field dissipation study. Based upon a review of that study and additional supplemental information on rice field infiltration rates supplied by the registrant, EFGWB (see EFGWB #90-0276 dated 2/23/90) concluded that study 00146415 completely satisfies the 164-2 data requirement.

164-5. Long Term Terrestrial (Soil) Field Dissipation: Correct. EFGWB (see EFGWB #80863 dated 9/14/90) recommended that the registrant's waiver request be denied, but that the data requirement be held in reserve pending a review of results from the aerobic soil metabolism and terrestrial field dissipation studies.

165-1. Accumulation in Confined Rotational Crops: EFGWB has no record of the registrant having satisfied the data requirement. The registrant requested a waiver of the data requirement for benomyl because benomyl rapidly hydrolyzes to carbendazim (MBC) and the registrant had previously submitted a confined study for carbendazim. EFGWB (see EFGWB #80863 dated 9/14/90) recommended rejecting the waiver request because EFGWB had previously concluded (see EAB #80753 dated 8/8/88) that the confined carbendazim study (Rhodes 1988, no MRID or Ascension # given) did not satisfy the data requirement for carbendazim. However, based upon the rapid hydrolysis of benomyl to carbendazim, EFGWB will consider any confined study which does satisfy the data requirement for carbendazim or benomyl to also satisfy the data requirement for the other compound.

165-3. Accumulation in Irrigated Crops: EFGWB (see EFGWB #80863 dated 9/14/90) recommended rejecting the registrant's waiver request because they failed to submit information to support their claim that the draining of rice fields during August does not coincide with the irrigation of other crops grown in rice growing areas. Based upon information recently received from the registrant, EFGWB has recommended that the waiver request be granted.

165-4. Laboratory Accumulation in Fish: On 6/20/86, EFGWB (see EAB #6250) concluded that a carbendazim (MBC) accumulation in fish study (Hutton, Kasprzak, and Priester 1985; Asc. #260573) satisfied the data requirement for carbendazim. On 12/24/87, EFGWB (see EAB #70858) concluded that the carbendazim study also satisfied the data requirement for benomyl due to the rapid hydrolysis ($t_{1/2} \leq 2$ hours for pH 5-9) of benomyl to carbendazim.