109702
SHAUGHNESSEY NO.

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REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 2-7-83 OUT 5/19/83

FILE OR REG. NO. 279-GNET

PETITION OR EXP. PERMIT NO.

DATE OF SUMBMISSION 1-31-83

DATE RECEIVED BY HED 2-4-83

RD REQUESTED COMPLETION DATE 5-26-83

EEB ESTIMATED COMPLETION DATE 5-19-83

RD ACTION CODE/TYPE OF REVIEW 121/New Chemical

TYPE PRODUCT(S): I, D, H, F, N, R, S Insecticide

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. F.Gee (17)

PRODUCT NAME(S) Ammo 2.5 EC

COMPANY NAME FMC Corporation

SUBMISSION PURPOSE Proposed Full Registration of Lettuce Use, Tomato Use

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.

1

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

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

TO: Mr. F. Gee, Pm Team 17
Registration Division TS-767

THRU: David Coppage
Head, Section #3
Ecological Effects Branch
Hazard Evaluation Division TS-769

THRU: Clayton Bushong
Branch Chief
Ecological Effects Branch
Hazard Evaluation Division TS-769

SUBJECT 1. Ammo 2.5 EC (Cypermethrin), Proposed Full Registration For Lettuce Use.

2. Ammo 2.5 EC (Cypermethrin) Proposed Full Registration of Tomato Use.

FMC Corporation is requesting registration of cypermethrin on lettuce and tomatoes. Cypermethrin is a synthetic pyrethroid that is very highly toxic to aquatic animals. The toxicity range is in the low parts per billion to low parts per trillion. A runoff study (EPA Access No. 070558, Sect. J12) showed that detectable amounts of cypermethrin were found 8 miles down stream from a cotton field where the pesticide was applied. Also, sediment samples of 2 ppb were found as far away as 165 meters downstream from the treated field. This exceeds the LC_{50} value of all the aquatic invertebrates tested. At present the toxicity of sediment bound cypermethrin is undetermined at this time.

Both the lettuce and tomato use labels have "repeat as necessary" application directions. Because of the extreme toxicity of cypermethrin to aquatic invertebrates and multiple applications, this could result in sediment contamination reaching levels that could have severe effects on benthic organisms. The depletion of this trophic level would subsequently have an affect on fish populations which depend upon these organisms for food. Also, lettuce and tomatoes are irrigated crops. This would contribute to water contamination via runoff.

2

In a review for cotton use (T. Johnston 4/27/82), the "Rebuttable Presumption Against Registration" criteria were met. Therefore a field study to assess the effects of repeated applications of cypermethrin on benthic organisms in a pond was requested. In view of the application directions for lettuce and tomatoes, a situation similar to cotton could exist.

Therefore, until an acceptable aquatic benthic study is submitted, there are insufficient data to make a hazard evaluation. If an evaluation must be made upon the available data, a severely unreasonable risk to aquatic organisms is anticipated.

Wayne C. Faatz, Ph.D.
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