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SHAUGHNESSEY NO

REVIEW NO.

EEB REVIEW

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TYPE PRODUCT(S) Miticide

DATA ACCESSION NO(S) 410267-01

PRODUCT MANAGER, NO. Dennis Edwards 12

PRODUCT NAME(S) Dicofol

COMPANY NAME Rohm and Haas

SUBMISSION PURPOSE Submission of Oyster Shell Growth Study

SHAUGHNESSEY NO. CHEMICAL % A.I.

*Check on
guidance
no 383*

72-3B

*MPID
41026701 72-3*



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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

June 14, 1990

MEMORANDUM

SUBJECT: Review of Oyster Shell Growth Study with Dicofol
Reg# 707-203

FROM: James W. Akerman, Chief
Ecological Effects Branch
Environmental Fate and Effects Division H7507C

TO: Dennis Edwards PM 12
Insecticide/Rodenticide Branch
Registration Division H7505C

The registrant, Rohm and Haas, has submitted an oyster shell growth study conducted with kelthane (dicofol). The study is identified as MRID# 410267-01, 72-3 B

Citation: Manning, C.S. 1988. Kelthane Technical: Acute Toxicity on Shell Growth of the Eastern Oyster (Crassostrea virginica). Conducted by Environmental Science and engineering, Inc., Gainseville, FL. ESE No. 88309-0200-2130. Submitted by Rohm and Haas Company.

✓ Conclusion: The study is scientifically sound and fulfills the guideline requirements for a mollusc flow-through shell deposition test. With a 96-hour EC50 of 15.1 ppb mean measured concentration, Kelthane is considered very highly toxic to eastern oysters. The NOEC was 4.4 ppb, with the LOEC being 10.4 ppb.

Data Requirements Status

1. A fish early-life stage study (72-4) with a coldwater species is required. The original study was conducted with the fathead minnow. However, in acute toxicity tests, the fathead exhibited much less sensitivity to dicofol than did coldwater species (lake trout and cutthroat trout).

Fathead minnow LC50 = 0.5 ppm¹
Fathead minnow NOEL = 0.019 ppm (embryo larvae study)
Lake trout LC50 = 0.0869 ppm
Cutthroat trout LC50 = 0.0531 ppm

An extrapolation using the ratio of the fathead minnow LC50 to chronic NOEL shows that coldwater fish species may potentially have a NOEL of 0.003 ppm (3 ppb). Therefore, EEB requires that this be verified via laboratory testing with a coldwater species.

2. Monitoring (70-1) of avian food items and aquatic habitats is also required. This is ongoing according to the registrant, with the first report anticipated for the end of 1990.

3. Reserved is a fish life-cycle test (72-5)².

4. It is possible that if exposure in aquatic habitats is expected to exceed aquatic organisms acute or chronic concern levels, that biological field testing would be required to negate concern or quantify the effects to aquatic and/or estuarine organisms.

¹ Based on information presented in the Feb 17, 1981 kelthane Registration Standard.

² See the List A Project Summary Sheet.