EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN 12/2/76 OUT 12/3/76 IN _____ OUT _____

FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 100-LIT

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED _____

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED 3CID-2B-yes

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

PRODUCT MGR. NO. Jacoby 24

PRODUCT NAME(S) CGA-24705 Technical

COMPANY NAME Ciba-Geigy

SUBMISSION PURPOSE Registration for use in formulation of herbicides

CHEMICAL & FORMULATION 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)acetamide

1.0 Introduction

1.1 Active ingredient: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl acetamide 95%

1.1 Product name: CGA-24705 Technical

2.0 Directions for Use

2.1 No end uses other than formulation uses are proposed for this technical product.

3.0 Discussion of Data

3.1 Environmental Chemistry data found in 2 volumes submitted with P.P. No. 5F1606 are referenced. An acceptable hydrolysis study and activated sludge study are not referenced. Other referenced data are not reviewed at this time since they are not relevant to the proposed use of this technical product.

4.0 Conclusions:

4.1 A hydrolysis study and activated sludge study will be needed.

5.0 Recommendations

5.1 We cannot concur with the proposed use of this technical product.

5.2 The following data will be needed.

(1) Hydrolysis. Hydrolysis data are required for all pesticides. Studies are conducted in darkness using radioisotopic or other comparable techniques at different pH values (acidic, neutral and basic) at two concentrations and two temperatures. Aliquots in duplicate should be taken at four sampling time intervals, with at least one observation made after one-half of the pesticide is hydrolyzed, or thirty days, whichever is shorter. A material balance (the total accountability at the completion of an experiment of the pesticide introduced into a defined system including both identified and unidentified products) half-life estimate, and identification of degradation products for the pesticide must be provided. Studies utilizing distilled water provide an upper limit estimate for persistence of pesticides in the aquatic environment. Hydrolysis in natural waters may be carried out to supplement studies in distilled water.

(Z) Activated Sludge Metabolism

Pesticides discharged into waste water treatment systems may be transformed or disrupt the treatment process. A study of effects of pesticides on the wastewater treatment process is required. Synthetic sewage (nutrients) and radioisotope material are added to activated sludge and aerated in a closed system for 23 hours; the sludge is allowed to settle for 30 minutes. A liter of supernatant (effluent) is removed for pesticide residue analysis including a material balance. Fresh synthetic sewage and test compound are added to the remaining sludge and the cycle including fresh synthetic sewage and test compound, is repeated. Dosage should start at 0.1 ppm and increase by increments to 100 ppm. Effects on microbial population must be determined by daily total counts of viable organisms in sludge.

R E Ney 12/8/76

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