

US EPA ARCHIVE DOCUMENT

EEE BRANCH REVIEW

DATE: IN 9/30/76 OUT 10/22/76 IN _____ OUT _____

FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

-64

FILE OR REG. NO. _____

PETITION OR EXP. PERMIT NO. 279-EUP-66

DATE DIV. RECEIVED _____

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED _____

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

PRODUCT MGR. NO. Stubbs 1.6 EC ? 0.8 EC

PRODUCT NAME(S) FMC 30980, 45812 & 45497

COMPANY NAME FMC Corp.

SUBMISSION PURPOSE Submission of data requirements

CHEMICAL & FORMULATION FMC 30980 - 109702

(cyano)(3-phenoxyphenyl) methyl cis/trans
 -3-(2,2-dichloroethenyl)-2,2-dimethylcyclo-
 propane-1-carboxylate

100.0 Pesticidal Use

For control of insects in cotton

100.1.12 Application Directions/Rates

See previous reviews by R. Felthousen

100.1.3 Purpose of this submission

Resubmission with additional fish and wildlife data.
See previous reviews for description of EUP programs.

101.0 Chemical & Physical Properties

101.0 Chemical Name

Cvano (3-phenoxyphenyl) methyl
3-(2,2-dibromoethyl)-2,2-dimethylcyclopropanecarboxylate

101.1 Common Name

chloro
FMC 45498 0.21 EC FMC 30980 1.6 EC
FMC 45497 0.8 EC
FMC 45312 ?

102.0 Behavior in the Environment

No data submitted

103.0 Toxicological Properties

103.1 Acute Toxicity

103.1.2 Avian

Organism	Test	Result	Material
Mallard Duck	Acute Oral	4.640 mg/kg	Tech. FMC 45497
"	LD ₅₀	"	" FMC 45812
"	" *	"	" FMC 30980

Remarks: Studies were conducted by wildlife International, LTD.
and submitted Sept. 1976 by FMC Corp. Studies are acceptable
for registration under Section 3 Regulations.

103.1.3 Fish

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<u>Report</u>	<u>Organism</u>	<u>Test</u>	<u>Result</u>	<u>Material</u>
1	Bluegill Sunfish	96 hr. LC ₅₀	3.07 ppb	Tech. FMC-30980
2	" "	"	3.75 ppb	" FMC-45812
3	" "	"	1.80 ppm	" FMC-45497

Remarks: Report #1 - Study conducted by EG & G Bionomics, Wareham, Mass. and submitted by FMC Corp. in Sept. 1976.

Report #2 - Studies conducted by Aquatic Environmental Sciences, Tarrytown, N.Y. and submitted by FMC Corp. in Sept. 1976.

Summary: All fish toxicity studies submitted were acceptable for registration under the Section 3 regulation.

103.1.4 Aquatic Invertebrate

<u>Report</u>	<u>Organism</u>	<u>Test</u>	<u>Result</u>	<u>Material</u>
1	Daphnia magna	48-hr EC ₅₀	0.967 ppb	Tech: FMC-30980
2	" "	"	0.26 ppb	" FMC-45812
3	" "	"	2.81 ppm	" FMC-45497

Remarks: Report #1 - Study conducted by EG & G Bionomics and submitted by FMC Corp. in Sept. 1976.

Report's 2 & 3 - Studies conducted by Aquatic Environmental Science, Tarrytown, N.Y. and submitted by FMC Corp. in Sept. 1976.

Summary: All Aquatic invertebrate studies submitted were acceptable for registration under Section 3 Regulations.

104.0 Hazard Assessment

104.1 Discussion

It would appear from acute toxicity studies that these synthetic pyrethroids developed by FMC are highly toxic to fish and aquatic organisms.

104.1.1 Adequacy of data

All studies submitted were acceptable for registration under Section 3 Regulations (see remarks 103.1.3 and 103.1.4).

104.1.2 Additional data required

For FMC 45497, 45812* and 30980 additional data required are:

1. An avian 8-day dietary LC50 study for both species of wild

*FMC 45812 was not included in original EUP program.

waterfowl (preferably the mallard) and 1 species of upland game bird (preferably the bobwhite quail).

2. A 96-hr LC₅₀ study for 1 species of cold water fish (preferably the rainbow trout).

For FMC 45498 and 35171 additional data required are:

All basic data requirements as listed in Section 3 Regulations and proposed guidelines.

104.1.3 Likelihood of Exposure to non-target organisms

Cannot be made at this time for lack of data.

105.0 Conclusions

1) The fish, wildlife and aquatic invertebrate data submitted for FMC 30980, 45812 and 45497 are acceptable for support of registration under Section 3 Regulations. This data will be be incorporated into our permanent files.

2) However, prior to consideration of registration the following data must be submitted:

For FMC 45497, 45812 and 30980 additional data required are:

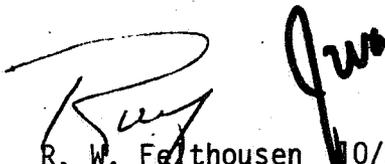
1. An avian 8-day dietary LC₅₀ study for both 1 species of wild waterfowl (preferably the mallard) and 1 species of upland game bird (preferably the bobwhite quail).

2. A 96-hr LC₅₀ study for 1 species of cold water fish (preferably the rainbow trout).

For FMC 45498 additional data required are:

All basic data requirements as listed in Section 3 Regulations and proposed Guidelines.

3) Additional studies may be required pending results of these tests.


R. W. Feltousen 10/22/76
Environmental Safety
Efficacy and Ecological Effects Branch