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Shaughnessey No.

EEB REVIEW

DATE: IN April 13, 1988 OUT April 18, 1988

FILE OR REG. NO. 241-EUP-119

PETITION OR EXP. NO. \_\_\_\_\_

DATE OF SUBMISSION March 28, 1988

DATE RECEIVED BY HED April 8, 1988

RD REQUESTED COMPLETION DATA June 27, 1988

EEB ESTIMATED COMPLETION DATE June 27, 1988

RD ACTION CODE/TYPE OF REVIEW 764

TYPE PRODUCTS(S): I, D, H, F, N, R, S Insecticide/nematicide

DATA ACCESSION NO(S). \_\_\_\_\_

PRODUCT MANAGER NO. W. Miller (16)

PRODUCT NAME(S) AC 301, 467 Terbufos 20 G

COMPANY NAME American Cyanamid

SUBMISSION PURPOSE Proposed revised EUP for use on corn, grain sorghum and sugar beets.

SHAUGHNESSEY NO.	CHEMICAL AND FORMULATION	% A.I.
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

EXPERIMENTAL USE PERMIT

Counter (AC 301,467) 20% ai G  
Amendment of March 28, 1988

100. SUBMISSION PURPOSE AND LABEL INFORMATION

100.1 Submission Purpose and Pesticide Use.

Test Material- Terbufos  
S-[[[(1,1-diethylethyl)thio]methyl]-  
0,0-diethylphosphorodithioate

Study Material- Terbufos 20 G.

EUP Applicant.

American Cyanamid Company  
Agricultural Research Division  
Box 400  
Princeton, NJ 08540

Principal Investigator- Dr. Guy R. Zummo

Purpose.

Field efficacy of a new formulation (granular).

This application for an EUP is an amendment to the previous application which was dated August 27, 1987. The amendment is identical to the earlier application except that it requests an increase in acreage from 450 A to 2,709 A. This review repeats the review of the original application almost exactly.

Study Objectives.

The objectives are to evaluate the formulation as an insecticide/nematicide in field corn, sugar beets and grain sorghum in ten acre plots in 26 states.

100.2 Formulation Information- Granular.

W/W %  
20.0 Terbufos  
80.0 Inert ingredients

Endangered species considerations were not mentioned.

101.2 Non-target Hazard Evaluation.

Non-target evaluation is not to be done on the assumption by the registrant that the change in formulation will not affect the hazards. EEB considers the change in the formulation to greatly modify the non-target hazards.

If a Terbufos 20G granule is .3 mg (a typical granule weight), then a songbird would get an LD<sub>50</sub> by eating 1.75 granules; if the granule weight is .066 mg (as is Terbufos 15G), then an LD<sub>50</sub> would be contained in 7.95 granules.

The lowest rate of application would provide 170 LD<sub>50</sub>s (for a songbird) per square foot of corn planting. The highest would provide 340 LD<sub>50</sub>s per square foot. Urban and Lyon (in preparation) of the EEB have proposed standards for granular pesticides that consider more than one LD<sub>50</sub> per square foot to be a "high risk of significant mortality to birds".

These calculations indicate a significant potential danger to non-target birds. The applicants should know that, if they wish to continue toward registration, they will have to conduct (at least) a Level I field trial.

101.3 Endangered Species.

The U.S. Fish and Wildlife Service has declared that the use of Terbufos 15G in major corn and sorghum growing areas causes jeopardy to certain endangered species (mostly aquatic) in the following counties of the following states:

Alabama

Colbert, Greene, Jackson, Lamar, Lauderdale, Limestone, Madison, Marshall, Morgan, Pickens and Sumter

Arizona

Graham, Maricopa, Mohave, Pima, Pinal and Santa Cruz

Arkansas

Benton, Clay, Clark, Cross, Lawrence, Lee, Pointsette, Polk, Randolph, Sharp and St. Francis

Virginia\*

Lee, Russel, Scott, Smyth, Tazewell, Washington  
and Wise

Since the experimental sites are in twenty-five states, there are a number of endangered species which could potentially be harmed. EEB must know where the sites are so that the endangered species hazard can be assessed. EEB, therefore, opposes the use of Terbufos 20G in the above cited counties due to possible adverse effects to endangered species.

## 102. Conclusions.

Since this is a relatively low-acreage field study, the hazard to non-target species will not have to be evaluated. However, since the change of formulation does affect that hazard, protocols for later field studies will have to include this evaluation. Granular Terbufos (15%) has exceeded levels of concern for certain endangered species in the corn and sorghum clusters (see section 101.1). It must be assumed that the hazards from a 20G formulation would be at least as great.

EEB cannot analyze this EUP application without the plans for endangered species protection. The locations of the experimental sites are essential to that evaluation. They should be submitted in detail. Specify the application rates and methods by plot type and location so that EEB can evaluate the hazards to endangered species. In the absence of this information, the registrant should not be permitted to conduct testing in the counties previously identified as having endangered species that would be jeopardized by the use of Terbufos.

In order to evaluate future EUP applications, EEB will need the following information: 1) the location of the experimental sites by at least county, 2) the application method and 3) the size of the granules.

Prior to future registration considerations in the use of Terbufos 20G on corn and sorghum, EEB must formally consult with the U.S. Fish and Wildlife Service regarding possible impact to endangered species.