

DATE: JUL 17 1980 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

7-17-80

SUBJECT: Expedited Review of Data - AMDRO

FROM: Review Section #1
Environmental Fate Branch

TO: Product Manager LaRocca (15)

Thru: Dr. David Severn, Chief
Environmental Fate Branch

Environmental fate data submitted by American Cyanamid in support of registration of AMDRO fire ant insecticide have been given an expedited review for validity and potential hazard. Much of the data had been previously submitted. The majority of this data has been given only brief reviews for information purposes (EFB reviews of 10-11-79 and 3-27-79). All data will receive a full review in the near future. Until such time, this memo represents the EFB view on AMDRO. It must be emphasized that, given the time constraints involved, the data have not yet received the scrutiny comparable to that received during a full review.

The environmental fate of AMDRO is not completely known. Significant data gaps exist as discussed below.

II. The following studies have been submitted and found acceptable:

- 1) octanol-water partition coefficient
- 2) aerobic soil metabolism
- 3) effect of microbes on AMDRO
- 4) leaching
- 5) field dissipation
- 6) rotational crop accumulation
- 7) fish accumulation - static catfish

II. The following studies have been submitted and found unacceptable in their present form:

- 1) hydrolysis - needs degradation product identification
- 2) photodegradation - invalid
- 3) fish accumulation - flow through/bluegill, invalid

No submissions have been made for the following data requirements.

- 4) effect of AMDRO on microbes
- 5) soil/water adsorption: desorption

Since AMDRO is applied in a bait form at a low rate (4g a.i./acre), does not leach, and has a very fast field dissipation rate ($t_{1/2} = 18$ hr), EFB does not contemplate hazardous exposure situations arising from the environmental chemical properties of AMDRO. The data deficiencies listed under section II above must be removed as a condition of registration. The highest priority must be given to photolysis data in both water and soil, including product characterization. EEB and EFB concur that a flow-through fish accumulation study (bluegill) is needed because although the submitted study appears to be invalid, an enormous bioconcentration potential is indicated. Because the amount of test chemical introduced to the fish was for in excess of the water solubility, the actual accumulation factor cannot be determined. The test chemical must be in solution, either by running the study below 5 ppb (preferable) or by using the same solvents to achieve solution at higher levels as were used in fish toxicity determinations (if analytical problems prevent the first approach).

Henry Appleton

Henry Appleton
Review Section #1
Environmental Fate Branch

cc: P. McGrath - HED
C. Bushong - EED/HED