234841 RECORD NO.

108501 SHAUGHNESSEY NO.

50 REVIEW NO.

EEB REVIEW

DATE: IN	11-18-88	OUT _	2/8/89		
FILE OR REG. NO	to the second	241-245			
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DATE OF SUBMISSION		_			
DATE RECEIVED BY EF	ED	11-18-88			
RD REQUESTED COMPLET	TION DATE _	1-18-89			
EEB ESTIMATED COMPLI	ETION DATE	1-18-89			
RD ACTION CODE/TYPE	OF REVIEW	665	5		
TYPE PRODUCT(S) : I	D, H, F,	N, R, S	Herbicide		
DATA ACCESSION NO(S	•				
PRODUCT MANAGER NO.			· · · · · · · · · · · · · · · · · · ·		
PRODUCT NAME(S) Prowl (Pendimethalin)					
winyshing and and a similar	· · · · · · · · · · · · · · · · · · ·				
COMPÁNY NAME	Ameri	can Cyanamid	Company		
SUBMISSION PURPOSE	Proposed	protocol to	combine aquat	ic field	
-	study (7	2-7) and aqu	atic dissipat	ion study	
· _	(162-4)	for rice use	in response t	o RS	
SHAUGHNESSEY NO.	CHEMI	CAL, & FORMU	LATION	% A.I.	
108501	Pendimethalin				
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

MEMORANDUM

Prowl Field Study Proposed Protocol PESTICIDES AND TOXIC SUBSTANCES SUBJECT:

SN# 108501

FROM: Jim Akerman

Ecological Effects Branch

Environmental Fate and Effects Branch (TS-769C)

TO: R. Taylor/F. Walters PM 25

Fungicide - Herbicide Branch Registration Division (TS-769C)

The Ecological Effects Branch (EEB) has reviewed the protocol for combined Guideline Studies 72-7 and 164-2 for the rice us3e of Prowl herbicide submitted to the Agency by the American Cyanamid Company on September 15, 1986. EEB received the protocol for review on November 18, 1988. The Engivironmental Fate and Ground Water Branch should comment on 164-2 requirements; our discussion will be limited to requirements of 72-7. This protocol was submitted as a result of requirements limited to requirements of the Registration Standard for Pendamethalin for a monitoring study. EEB is concerned the residues in receiving water could exceed those which impair finfish reproduction (10 ppb). To negate these concerns an aquatic residue monitoring study addressing both drift exposure and drainage into nearby waters was required to support the rice use.

submitted protocol (9/15/86) is inappropriate unacceptable to answer the concerns of the Registration Standard and EEB. The Standard required a monitoring study in order to establish the presence or lack of presence of Prowl in waters adjacent to rice use site (from drainage or drift). The objectives stated in the subject protocol (develop baseline data, examine diversity and productivity of pond inhabitants and develop a profile of the surrounding agricultural land) do not address this Ιf appropriately designed monitoring study an demonstrates pesticide contamination of adjacent waters, then a mesocosm study mnay be required (rather than a one pond-one control pond field study) to determine effects on biota.

The registrant should at this time depart from the submitted "field study protocol" and design a residue monitoring protocol (as required by the registration standard) to quantify the amount of pesticide leaving the rice field either from drift or drainage. The monitoring protocol should include, but not be limited to, the following parameters:

- 1. The monitoring program should attempt to observe and make measurements from "normal use practice" but not interfere with or alter normal use. Artificial or designed "test plots" are not acceptable.
- 2. At least five sites or fields per geographic region (depending on the number of regions) in which rice is grown should be selected for sampling in order to obtain a variety of drainage situations (either fresh or estuarine waters).
- 3. Sampling shall be done 1) in field, 2) at points of drainage exit and 3) of adjacent waters and include water column and soil/sediment. Design should address both drift at time of aerial application and drainage runoff at appropriate time intervals.
- 4. Sampling stations must be described on USGS topographic 7.5 minute series maps.
- 5. Analytical methodology used to measure residues must be described. Detection limit must be at least as low as the lowest chronic LC50 from test data.
- 6. Samples should be taken before, during and following applications of the pesticide and should include control sites.
- 7. Sampling should be done at regular intervals for a long enough period to account for such things as seasonal and use variations. The first 96 hours of sampling after application and/or flushing are critical as these average concentrations detected in the field may be used for loading amounts in a mesocosm study, if such assay is indicated.
- 8. Devices are required at each site to record continuous temperature and rainfall profiles.
- 9. Any proposed monitoring protocol should be reviewed by EPA before the program is initiated.

Questions/Comments--Otto Gutenson 557-3449

OFFICE OF PESTICIDE PROGRAMS DATA REVIEW RECORD

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Include original + two (2) copies with each submission

Pendimethalin ecological effects review
Page is not included in this copy.
Pages 5 through 25 are not included in this copy.
The material not included contains the following type of information:
Identity of product inert ingredients
Identity of product impurities
Description of the product manufacturing process
Description of product quality control procedures
Identity of the source of product ingredients
Sales or other commercial/financial information
A draft product label
The product confidential statement of formula
Information about a pending registration action
X FIFRA registration data
The document is a duplicate of page(s)
The document is not responsive to the request
The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

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