

US EPA ARCHIVE DOCUMENT

108501

EEE BRANCH REVIEW

DATE: IN \_\_\_\_\_ OUT \_\_\_\_\_ 3/24/78 4/28/78 IN \_\_\_\_\_ OUT \_\_\_\_\_

FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 241-EUP-80

PETITION OR EXP. PERMIT NO. 8G2040

DATE DIV. RECEIVED \_\_\_\_\_

DATE OF SUBMISSION \_\_\_\_\_

DATE SUBMISSION ACCEPTED \_\_\_\_\_

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

PRODUCT MGR. NO. L. Zink (Srs)

PRODUCT NAME(S) Prowl Herbicide for Exp. Use

COMPANY NAME American Cyanamid

SUBMISSION PURPOSE Use on Sorghum

CHEMICAL & FORMULATION Pendimethalin ([N-(1-ethylpropyl)-3,4-dimethyl]-2,6-dinitrobenzenamine)

Alternates Prowl, penexalin CL 92,553,  
AC 92,553

100.0 Introduction

100.1 This is American Cyanamid's first LUP for use of PROWL-4E (241-243) on soybeans (241-MIF-30).

100.2 The permit proposes postemergent treatments (incorporated) of 350 acres with 100 gallons (400 lb. a.i.) of PROWL-4E. The application rate depends on soil type and weed infestation. Testing sites are in the following states:

<u>Acres</u>	<u>States</u>
6	North Carolina, Louisiana, Georgia and Illinois
14	Arizona
20	New Mexico, South Dakota
23	Arkansas, California, Colorado
33	Missouri
50	Oklahoma
75	Kansas, Nebraska
170	Texas

200.0 Directions for Use (Sorghum)

200.1 Patent

Postemergent spray (incorporated 1-2 inch) at 0.5 - 1.5 lb. A/A.

<u>Soil Texture</u>	<u>PROWL-4E (gals/acre)</u>
course	1 - 2
medium	1.5 - 2.5
fine	1.5 - 3.0

Applications are made at the 0 - 6 inch growth stage, but may be applied as late as lay-by. Use 10 or more gallons per acre with ground equipment.



200.2 Environmental Hazards

"...Keep out of lakes, streams or ponds. Do not apply when weather conditions favor drift. Do not contaminate water by cleaning. . . or disposal of wastes."

200.4 Disposal (container)

"Drain. . . Rinse. . . do not reuse. . . crush and recycle for scrap to a steel melting plant.

"If preferred. . . crushed and/or buried at an approved dump site. . ."

300.0 Conclusion

A cursory review indicates the submitted EC-Data are sufficient to support the proposed use under the LUP. Note; our recent review (2/19/78) also supported a field-crop use of PROM-45 (only) on soybeans. No new data submitted.

500.0 Recommendations

500.1 We concur with the proposed use under the LUP.

500.2 All of the environmental chemistry data required by the Section 3 Regulations will be needed at the time of registration. See the attached sheet for a list of the required studies. The referenced data have not reviewed for the support of a registration.

Ronald E. Mey, Jr.

Z. B. Brittin, 4/27/78 *E. B. Brittin 4/9/78*

Environmental Chemistry Section

EEEB

4/28/78

Table 1 - Summary of environmental chemistry data requirements by intended use pattern

Data Require- ments	Use Patterns	Terrestrial Uses				Aquatic Uses				Terrestrial/ Aquatic Uses		To Support			
		Domestic Outdoor	Green- house	Non-crop	Tree Fruit-Nut Crop	Field-Veg Crop	Aquatic Food Crop	Aquatic Non-Crop	Forest	Direct Discharge	Indirect Discharge	Wastewater Treatment	Manu- facturing Use	Product Label Product	
		X	X	X	X	X	X	X	X	X	X	X	X	X	
<u>PHYSICO-CHEMICAL</u>															
Hydrolysis		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Photooxidation		X	X	X	X	X	X	X	X	X	X	X	X	X	X
<u>METABOLISM</u>															
Aerobic soil		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Anaerobic soil															
Anaerobic aquatic							X	X	X	X	X	X	X	X	X
Aerobic aquatic							X	X	X	X	X	X	X	X	X
Effects of mi- crobes on pesti- cides				X	X	X	X	X	X	X	X	X	X	X	X
Effects of pesti- cides on microbes			X	X	X	X	X	X <sup>a</sup>	X	X	X	X	X	X	X
Activated sludge												X	X	X	X
<u>TOXICITY</u>															
Leaching			X	X	X	X	X	X <sup>b</sup>	X	X	X	X	X	X	X
Volatility			X												
Adsorption									X	X	X	X	X	X	X
Water dispersal						X	X	X	X	X	X	X	X	X	X
<u>FIELD DEGRADATION</u>															
Soil		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Water									X <sup>c</sup>	X	X	X	X	X	X
Ecosystem (X <sup>d</sup> com- bined study with N1 X2 X5)									X <sup>d</sup>	X	X	X	X	X	X
<u>ACCUMULATION</u>															
Rotational crop									X	X	X	X	X	X	X
Irrigated crop									X	X	X	X	X	X	X
Fish				X	X	X	X	X	X	X	X	X	X	X	X
Special fish study															

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