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EEB REVIEW

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PETITION OR EXP. PERMIT NO. _____

DATE OF SUBMISSION 07/14/87

DATE RECEIVED BY HED 07/21/87

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RD ACTION CODE/TYPE OF REVIEW 171

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

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. Robert J. Taylor (25)

PRODUCT NAME(S) Imazapyr (Arsenal)

COMPANY NAME American Cyanamid

SUBMISSION PURPOSE Request to waive nontarget
plant data requirements

SHAUGHNESSY NO. CHEMICAL & FORMULATION % A.I.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 14 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: American Cyanamid Request for Waiver of
Phytotoxicity Data

FROM: Charles Lewis *Charles Lewis 3/28/88*
Ecological Effects Branch
Hazard Evaluation Division (TS-769C)

THRU: Douglas Urban, Section Head *Douglas Urban 3/30/88*
Ecological Effects Branch
Hazard Evaluation Division (TS-769C)

THRU: Harry Craven, Acting Chief *Harry Craven 4/14/88*
Ecological Effects Branch
Hazard Evaluation Division (TS-769C)

TO: Robert J. Taylor, PM 25
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Ecological Effects Branch (EEB) has considered the points raised in the American Cyanamid letter of July 13, 1987 and is providing the following comments.

Aquatic Plant Growth

Plant protection data requirements (40 CFR 158.150) call for aquatic plant growth testing to be conducted for all herbicides used in forest site preparation. This requirement is based on a concern that aquatic environments may be inadvertently sprayed during application and that runoff may result in contamination of bodies of water.

In a review conducted by Exposure Assessment Branch (EAB) by T. Dougherty dated September 25, 1987, on the fate of Arsenal in forest watersheds, it was concluded that runoff was a significant factor in the contamination of streams. Since it appears that Arsenal will find its way into aquatic systems, it is imperative that the Agency be provided data on concentrations that will cause a phytotoxic reaction in aquatic plants. Consequently, aquatic plant growth testing will be required for the following species: duckweed (Lemna gibba), marine diatom (Skeletonema costatum), blue-green alga (Anabaena flosaquae), freshwater green alga (Selenastrum capricornutum), and a freshwater diatom (unspecified species).

Seed Germination/Seedling Emergence, Vegetative Vigor

Subdivision J of the Guidelines recommends testing on six species of dicots (one of which is soybean Glycine max and one of which is a root crop) from at least four families and four species of monocots (one species of which is corn Zea mays) representing two families. Of the 10 plants required, only three are food crops. The Registrant has some degree of flexibility in selecting the other six species.

As indicated in the EEB review dated April 12, 1987, submission of all requested data for the seed germination and seedling emergence tests may satisfy the TIER II testing requirement. Use of the formulated product rather than the TGAI is acceptable; however, any change in formulation at a later date may require submission of additional phytotoxicity data.

The letter of July 13, 1987 indicates that American Cyanamid has data showing that the formulated product is more active than the technical. This information should be submitted to EEB along with the requested data for the seed germination/seedling emergence test.

The vegetative vigor requirement has not yet been satisfied and should be conducted at the TIER II level using the same species utilized in the seed germination/seedling emergence tests.

Chronic Hazard to Nontarget Organisms

EEB has considered the environmental fate data provided by EAB and has concluded that this use will not increase the chronic hazard to aquatic and avian species. Based on information currently available, further testing is not required.