11-4-94

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Subject: Trifluralin waiver request for Seedling Emergence, Guideline #123-1. DP# D207798

To: Walt Waldrop, PM 71
Special Review and Reregistration Division, 7508W

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch
Environmental Fate and Effects Division, 7507C
Douglas J. Urban 11/4/94

EEB has reviewed the waiver request submitted by DowElanco for a Tier II Seedling Emergence Study, Guideline #123-1 on trifluralin. It has been decided that the waiver request will be denied and therefore; Guideline #123-1, Seedling Emergence is still unfulfilled. However, the data can be used in a 'confirmatory' manner and its absence at this time will not impede the completion of EEB's Science Chapter for the Trifluralin RED.

DowElanco's argument for the waiver is that the Emergence Study would not provide any useful information because 1) the previously submitted Germination study has produced a useful EC25 and 2) the mode of action of trifluralin is to inhibit root cell growth, which would be evident in a Germination study not an Emergence study.

However, seedling shoot effects as well as root effects are expected from trifluralin exposure, based upon the following:

- the publication developed from the 1993 Purdue University 'Herbicide Action Course' states that trifluralin is a "mitotic poison" that "stops the growth of roots <u>and shoots</u> of seedlings", as is the case for most dinitroanaline chemicals. The section of this publication entitled "Inhibitors of Roots Only In Seedlings" does not include trifluralin.

- literature was presented by DowElanco in the May 17, 1994 'Use' meeting with OPP that states "(trifluralin) controls weeds by interrupting the development of new cells in the roots <u>and shoots</u> of susceptible seedlings".

Based on the above, it has been determined that data generated from Guideline #123-1 - Seedling Emergence, would be useful in plant risk assessments, especially for consideration in the protection of Federally Endangered plant species.

Questions regarding this review,please contact Dana Lateulere of my staff at 308-2856.

References

Donnelly, M. "Practical Use of Trifluralin, Environmental Protection Agency Presentation". May 17, 1994. DowElanco, Product Marketing.

Warren, G.F.and F.D. Hess. 1993. 'Mitotic Poisons, (Mitotic Disrupters)', Herbicide Action from the 1993 Purdue University's "Herbicide Action - An intensive course on activity, selectivity, behavior and fate of herbicides in plants and the environment".