2-10-87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

SUBJECT: Peer Review of EEB Response to Chevron's Comments on the Bolero Field Study Conclusions

FROM: Otto Gutenson, Biologist
Ecological Effects Branch

THRU: Norman Cook, Head-Section 2
Ecological Effects Branch

TO: Michael W. Slimak, Chief
Ecological Effects Branch

A group of four Ecological Effects Branch (EEB) staff (O. Gutenson, J. Felkel, C. Brassard, and C. Natella) have peer reviewed the draft EEB response to Chevron's comments regarding the Bolero herbicide rice field study conclusions (D. Rieder, 1986). The peer review group concurs with the logic and overall conclusions and comments regarding the Bolero field study. The objective of the study was to show that "Bolero could be used on rice in the Southern United States without having an adverse impact on adjacent aquatic or estuarine habitat." It is the opinion of the review group that the field study has failed to demonstrate this. To the contrary, the study shows a fish kills and adverse reproductive effects, among other effects, on shrimp concurrent with the use of the pesticide. Although the study is flawed and correctly rated as supplemental, the weight of evidence indicates that the use of Bolero will cause an impact on non-target fish and invertebrate populations. The environmental effects shown in the course of the field study cannot reasonable be explained or negated by "external conditions" as Chevron states.

The peer review group had a number of comments principally concerning wording and consistency, all of which will be past on to D. Rieder. These comments include:

1. Rank the effects as to most important - effects that alone are critical first, i.e., fish kill and invertebrate reproductive effects and effects which add validity but are supplemental second.

(1)

2. Change "Reponse I" to be more definite, i.e., "The declines observed may or may not have been caused by natural factors. Declines in populations and even dead fish were noted, therefore, the study does not negate our concern."

3. More emphasis on levels of Bolero detected in both water and sediments (Response E and F) is necessary.

4. The "Study Purpose" should be stated consistently throughout all comments.

5. Request for additional studies, i.e., multi-site (8) monitoring, should be included in the response to Chevron.

The peer review group agrees ..."that the use of the pesticide ... may result in residues in the environment of non-target organisms at levels which equal or exceed concentration acutely or chronically toxic..." (40 CFR 154.7) and, therefore, registration of the pesticide for this use should not continue. Although the data collected in the field study may not be of high enough quality to strongly support Special Review, new field studies were not recommended. Lowering the application rate is not viewed as a viable method to reduce risk. Consideration should be given to further monitoring studies, i.e., a multisite (8) study to determine statistically the potential for residues in biota and sediment occurring as a result of use on rice fields. During the duration of the monitoring study it would seem appropriate to limit the production/use of the pesticide to any extent possible to avoid undo adverse effects to non-target aquatic species.

Concurrence:

Michael W. Slimak, Chief
Ecological Effects Branch 2/13/87

Norm Cook, Coordinator
Aquatic Field Study Team 2.13.87

Peer Review Group:

Otto Gutenson, Biologist
Carol Natella, Wildlife Biologist
Candy Brassard, Environmental Protection Specialist
Jim Felkel, Wildlife Biologist

2