SHAUGHNESSEY NO. REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 11-13-84 OUT 1/2/85

FILE OR REG. NO. 264-330, 264-331

PETITION OR EXP. PERMIT NO.

DATE OF SUBMISSION 7-20-84

DATE RECEIVED BY HED 11-9-84

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RD ACTION CODE/TYPE OF REVIEW 616/Reg. Std.

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

DATA ACCESSION NO(S). J. Ellenberger

PRODUCT MANAGER NO.

PRODUCT NAME(S) Temik

COMPANY NAME Union Carbide Agricultural Products Co., Inc.

SUBMISSION PURPOSE Registrant Repsonse to Registration Standard

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.

Environmental Safety Review
Fish and Wildlife

100.0 Submission Purpose: Union Carbide previously submitted comments prepared by their research cooperators related to EEB's Review of a field study on Temik. When EEB reviewed these comments, there appeared to be some discrepancies in reference data and what was in our file. Therefore, we deferred final evaluation of the comments until a copy of the study reports was obtained.

100.4 Discussion

The comments referenced transect surveys, which were indicated to be conducted in addition to a permimeter walk. Our records did not reflect this data. In examining the study report it appears that this data, the transect surveys is combined with the perimeter work (Appendix A of study report). While these methods are referred to as censusing methods, and were conducted pre and post treatment, the manner in which they are presented reflect more of an inventory of species, not a density estimate. The data is reported as average birds per day. There is no indication that these census methods were standardized to time or some other parameter to make them comparable. Therefore, we're somewhat preplexed about what to do with this information relative to drawing conclusions on the impact of the treatment to avian species.

The comments also reinforce our concerns that census methods, mapping, behavioral observations and carcass searches were combined during one transect survey. As pointed out in the original review, considering the intense observation necessary to do any one of these, combining them would seem to lessen the realiability of the information collected.

We also, in the original review, raised questions with the absence of a method to determine the realiability of the carcass searches. They indicate, that while no effort was made to determine this, they believed that since fields were bare, and the observers utilized were experienced field men that carcases on the bare soil would not have been readily missed. They go on "that carcasses in the dense, weedy ditch banks would have been more difficult to find. If small birds had fallen in the dense grass and worked their way below the vegetation mat, they would be unlikely to be found". Basically, we agree that carcasses on the bare soil would be much more readily found if present. However studies have shown that carcasses disappear extremely rapidly in some field circumstances, therefore, in the absence of some method to determine the percent recovery of the search methods, inferences drawn from the data are more questionable.

They also indicate that they believed that the trials were conducted under actual use conditions. The application of the Gort field seems to raise question with this statement. It appears that only the border area of one side of a 150 acre corn field was treated. This does not appear to be what would normally be expected. Also, the treatment does not appear to be representative of a application in high corn production area where many if not all cornfields in the area may be treated.

They indicate that the use of singing territorial males (especially Red-winged black birds) is a standard technique that has been applied by others in such circumstances. They believe that the continued stability in these index bird populations, consistant with environmental changes, support the hypothesis that the use of Temik incorporated into the soil at planting did not adversely affect non-target vertebrates.

While this method can provide useful information it can lend to erroneous conclusions--particularly, if there are adequate males in the area to replace territorial males which are lost. The study design did not account for this possibility.

107.0 Conclusion

EEB has reviewed the comments submitted by Union Carbide relative to EEB's Review of their field study on Temik. The information submitted does not alter our conclusion on this study; that is, the study is insufficient to meet the requirement imposed on the registration of Temik 15C.

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