

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: October 12, 1979

SUBJECT: Validation Review on IBT Study No. 651-06763 - Delayed Neurotoxicity Study of VEL 4283 in Chickens. CASWELL#706A

FROM: Larry Anderson
Toxicology Branch (TS-769) *Larry Anderson*

TO: Branch Chief
Regulatory Analysis and Lab Audits
Special Pesticides Review Division (TS-791) *W. Brown*

THRU: Dr. M. Adrian Gross, Chief
Toxicology Branch (TS-769)

Discussion

At this time this study is concluded to be invalid as an estimate of the neurotoxic potential of VEL 4283 (Propetamphos) in chickens. Outstanding deficiencies include:

1. The lack of histopathologic evaluation of nerve tissue.
2. Failure to antidote birds against acute anticholinergic effects of the test compound to improve survivability.
3. Failure to employ a positive control test group.

Nonetheless, the data show that of the 10 birds given the LD₅₀ dosage of 94.4 mg/kg, 5 survived the initial dosing and 2 survived a second dosing at 21 days. Additionally, all 10 birds administered 1/2 of the LD₅₀ dose initially and at 21 days survived less. The registrant indicates that wet tissues (brain, spinal cord, sciatic nerve) from all birds on study are available for microscopic examination. If these tissues are so examined and the results submitted for evaluation, then enough information may be available to show a valid definition of neurotoxic potential from this study.