

US EPA ARCHIVE DOCUMENT



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

041701

MEMORANDUM

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

TO: Spencer Duffy  
Special Review Branch  
Registration Division - TS-767c

THRU: Harry Craven  
Registration Standards Coordinator  
Ecological Effects Branch  
Hazard Evaluation Division - TS-769c

SUBJECT: Estimated Aquatic Residues of Fonofos

1. Runoff modelling of aquatic residues of fonofos (P. Datta, Exposure Assessment Branch, 22 Jul 83 - attached) in ponds and small rivers has been received and reviewed. Below is a summary of the peak concentrations (water column) as indicated in EAB's report:

I. Steady State Model

Maximum  
PPB's of Fonofos in the water column  
runoff loading categories

<u>Aquatic Site</u>	<u>Typical</u>	<u>moderate</u>	<u>worst case</u>
pond	0.71	1.4	5.9
river	0.05	0.091	0.38

II. Pulse Model

<u>Aquatic site</u>	<u>Maximum Concentration(ppb)</u>
pond	0.45
river	0.01

2. The Ecological Effects Hazard Assessment for fonofos (R. Balcomb, 28 Feb 83) was provisionally completed using fonofos residues measured in tail-water pits. These residues are substantially similar to the estimates by EAB for small ponds. Our previously submitted hazard assessment and data requirements, therefore, remain in effect. Simply stated, acute poisoning of fish in ponds adjacent to fields is not

likely to routinely occur, but, in widespread use, occasional fish kills can not be ruled out (typical EEC = 0.71 ppb, worst case EEC = 5.9 ppb, lowest fish LC<sub>50</sub> = 7 ppb). It should be noted that model predictions for flowing water (rivers and streams) indicate that fonofos poses no appreciable acute hazard to these environments.

The Exposure Assessment Branch report indicates that Fonofos will be available to aquatic organisms in ponds sufficiently long (216 days to 75% removal) to justify the invertebrate and fish chronic studies requested in the standard. An aquatic risk analysis can not be completed without these chronic studies nor testing on acute toxicity to invertebrates, which remains a data gap.

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cc: A. Rispin, SIS/HED  
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