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

MAY 19 1988

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Lindane: Toxicology Branch response to Residue Chemistry Branch inquiry concerning more adequate identification of lindane residues in goat liver and kidney.

TOX CHEM No.: 527

FROM: John Doherty 5/19/88
Toxicology Branch
Hazard Evaluation DIvision (TS-769)

TO: Charles L. Trichillo, Ph.D., Chief
and
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Residue Chemistry Branch
Hazard Evaluation Division (TS-769)

and
George LaRocca
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THROUGH: Edwin Budd
Section Head
Toxicology Branch
Hazard Evaluation Division (TS-769)

Budd 5/19/88
5/19/88

Residue Chemistry Branch (RCB, refer to Dr. C. Deyrup memo dated March 31, 1988, attached) has reviewed a goat metabolism study with radiolabelled lindane and determined that greater than 90% or "almost none of the TRR (total radioactive residue) was identified". RCB also indicates that "there is no way of determining residue levels is liver, even though radioassay indicates that levels of metabolites far exceed the established tolerances of 7 ppm in goat fat (there are no established tolerances for other tissues). A similarly confused metabolic picture exists in kidney tissue".

RCB further states that "If TOX (TB) is concerned about the unidentified residues in liver and kidney, the registrant will need to carry out further work".

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Toxicology Branch Response

TB is concerned with the unidentified residues in liver and kidney and is also concerned that analytical methods be available to determine the residues in these and other organs.

The registrant should be required to identify the liver and kidney metabolites as far as reasonably possible as well as determine the approximate half life of the total residue in these organs.

Failure to identify the metabolites or the half life of radiolabelled lindane in the kidney is of special concern because this organ has been identified as a target organ for lindane toxicity.