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DATA ACCESSION NO(S).

PRODUCT MANAGER NO. G. LaRocca (15)

PRODUCT NAME(S) Lindane

COMPANY NAME CIEL

SUBMISSION PURPOSE Submission of revised protocol for aquatic residue testing

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

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

15 SEP 1986

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Review of Spray Drift and Run off Monitoring Study Protocol for the Use of Lindane (Reg. No. 359-686) on Pecans

FROM: Ann Stavola 9/9/86
Aquatic Biologist
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Hazard Evaluation Division (TS-769-C)

THRU: Douglas Urban 9/17/86
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THRU: Michael Slimak 9/16/86
Chief
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TO: George LaRocca, PM-15
Insecticides Rodenticides Branch
Registration Division, (TS-767-C)

Rhone-Poulenc, Inc. submitted a protocol for a spray drift and runoff study to monitor residues of lindane from its application to pecan trees.

A single-application of Lindane EC, 12.85% active ingredient, is to be made to a grove of pecan trees adjacent to a biologically active pond. Lindane is applied at the rate of 1.89 pounds active ingredient/acre with an air blast sprayer. Sampling stations throughout the application area, on the pond and outside the spray area are to collect spray drift and surface runoff data from drift cards, vegetation, soil, pond water and sediment.

The protocol contains little information on the study site other than a description of the properties the proposed site should have. Unfortunately, the registrant

decided to begin the study before the Agency received detailed information on the chosen site. EEB needs a detailed description of the site including photographs and topographic and soil survey maps to verify that the site fits the requirements.

The proposed method for collecting and measuring surface runoff is also inadequate. The protocol states that collection bottles are to be implanted into the major drainage channels, and they will collect up to one-liter of runoff water. There is no information regarding the number of bottles per channel or how the amount of lindane measured in the bottles will be related to the pesticide's runoff in the whole watershed.

The registrant should refer to the Agency's publication on methods for measuring pesticide runoff, Field Agricultural Runoff Monitoring (FARM) Manual, EPA/600/3-85/043, June 1985. The manual recommends that flumes and water level recorders be used to monitor flow rates and runoff volume and automatic samplers be used to determine the amount of pesticide residue in the runoff water. The bottle method proposed in the protocol is unsatisfactory because if the amount of rainfall is high the bottle may fill in the early stages of the runoff event and not measure any peaks of lindane residues that may occur in the latter part of the event.

Finally, the wind at the time of application should average 5 to 10 mph, not 2 to 10 mph.

If we find that either the site or the methods used to monitor drift and runoff were inadequate the study likely will be rejected.