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SHAUGHNESSEY NO.

REVIEW NO.

EEB REVIEW

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

DATA ACCESSION NO(S). _____

PRODUCT MANAGER NO. G. LaRocca (15)

PRODUCT NAME(S) Asana/Pydrin

COMPANY NAME DuPont

SUBMISSION PURPOSE Submission of final fenvalerate mesocosm protocol

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Mesocosm Protocol Review for Asana
(Esfenvalerate)

TO: George LaRocca (15)
Insecticide-Rodenticide Branch
Registration Division (TS-767C)

FROM: James Akerman, Branch Chief
Ecological Effects Branch
Hazard Evaluation Division (TS-769C)

E.I. duPont de Nemours & Company has submitted a revised mesocosm protocol in response to previous protocol reviews and meetings with EEB. EEB's previous review (Touart; 4/13/87) of the protocol indicated that the protocol was acceptable contingent on agreement of treatment methods and rates. The ensuing meeting between the registrant and EEB on May 11, 1988 discussed the loading regime of the study. The agreement reached by both parties on the treatment rates for drift and runoff were summarized in the previous EEB memorandum dated 6/9/88 (R. Lee).

The final protocol submission revised the agreed upon rates. However, there were noticeable minor discrepancies in the higher and middle dosage rates for the drift parameters in the revised protocol. EEB's rate figures for the high and middle dose ranges were 1134 mg. a.i./ pond and 284 mg a.i./pond, respectively. The registrant's protocol indicates 1130 mg a.i./pond and 280 mg a.i./pond for the same high and middle dose range, respectively. The registrant is advised to note and advise EEB of this slight change in the agreement. EEB assumes that this minor change is the result of "rounding off" of the numbers. Personal communication with EEB modeler, Richard Lee, indicates that the minor change will not impact the study. EEB must be notified of any future rate changes.

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Beyond the agreement concerning the treatment methods and rates by EEB and the registrant, the following excerpted points of interest raised during the previous protocol review (Touart; 4/13/87) were either addressed in the revised protocol or subject to continued address by the registrant.

EEB: 1) The ponds should develop a natural fauna and flora consistent with aquatic systems in the general area of the test, deficiencies noted during the acclimation phase should be rectified by addition of appropriate organisms in the treatment phase of the test.

Registrant: 240 fingerling bluegill (70-120mm length) were introduced to each pond, in addition to 8 grass carp for the control of macrophytes. Macrophytes were obtained locally; these are representative of ponds in east-central Alabama. Other biota sampling parameters are plankton, macroinvertebrates, filamentous algae, and emerging adult insects.

EEB: 2) Bottom sampling with Ekman dredge during the acclimation phase should be scrutinized for possible disruptions to benthic biota.

Registrant: There were no discussions of technique scutinization in the protocol resubmission. As a result, EEB requests observation notes of this sampling technique concern in the next quarterly report.

EEB: 3) Fertilization must be closely monitored to ensure that eutrophic conditions will be averted in the treatment phase.

Registrant: The registrant has advised that the treatment phase has just been initiated (July, 1988). The registrant is required to inform EEB of any possible eutrophic conditions that develop.

EEB: 4) Determinations of treatment rates should make use of available models (i.e., SWRRB, Holst Drift, etc.) and experimental data to arrive at a typical value which will represent all (or at least the predominant) registrations of Asana (Pydrin).

EEB: 5) High and low treatment levels should be based on the range of expected exposures from minimal to worst case situations, if 10(x) and 1/10(x) are adequate to span the range fine, other wise different multiples should be considered.

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EEB: 6) Any modifications in the treatment phase methods warranted from observations made in the acclimation phase should be made in consultation with EEB staff.

Registrant: The registrant has addressed these remaining points (4,5,&6) in previous meetings with EEB and in the revised protocol. Any additional changes in the treatment phase methods must be made in consultation with EEB.

John Noles
Biologist/EEB
557-1945

John Noles
8/2/88