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

NOV - 4 1991

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

SUBJECT: Resubmission of New Chemical Screen for RH-7592
(Fenethanil)
Other Names: Fenbuconazole, Indar 2F
Chemical No. 129011
CAS Reg. No. 114369-43-6
File Symbol/Reg. No. 707-EGN
DP Barcode: D170220

TO: C. Giles-Parker/D. Wilson
Product Manager 22
Registration Division (H7505C)

THRU: Henry Jacoby, Chief *Henry Jacoby*
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

THRU: Paul J. Mastradone, Chief *Paul J. Mastradone*
Review Section 1
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

FROM: Arnet W. Jones, Agronomist *Arnet W. Jones*
Review Section 1
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This memorandum is a follow-up to EFGWB's memorandum of August 2, 1991 regarding the registrant's (Rohm and Haas Co.) request for a new chemical screen for RH-7592 Agricultural Fungicide (common names Fenethanil, Fenbuconazole, Indar 2F) for use on stone fruits and pecans. Following submission of additional data by the registrant, EFGWB concludes that there are sufficient environmental fate data for the chemical to pass the new chemical screen for the proposed use pattern.

This chemical originally failed the new chemical screen because information was lacking for three data requirements: terrestrial field dissipation (164-1), accumulation in confined rotational crops (165-1), and accumulation in fish (165-4). Noted below is a summary of the deficiencies originally cited and the new information submitted which enables this chemical to pass the new chemical screen:



The terrestrial field dissipation (164-1) data originally submitted was an interim report. The registrant has submitted a final report which appears to be reviewable and therefore passes the new chemical screen. EFGWB notes that some of the frozen storage stability data submitted in support of this study was provided by Craven Laboratories. However, at this time it does not appear that these data compromise the validity of the field dissipation data.

Since only registration for pecans and stone fruits is being sought, and since there are no rotational crops for stone fruits and pecans, the accumulation in rotational crops (165-1) data requirement is not applicable at this time. These data may be required if registration for additional terrestrial food crop uses is sought at a later date.

The fish accumulation (165-4) study submitted in support of registration originally failed the new chemical screen because some metabolites of RH 7592 were not adequately characterized. The registrant has submitted additional data regarding identification of these metabolites. These data appear to be reviewable.

The status of the environmental fate data requirements for the registration of RH-7592 for terrestrial food crop use is outlined below:

<u>Data Requirement</u>	<u>Status</u>	<u>MRID No.</u>
<u>Degradation</u>		
Hydrolysis (161-1)	Fulfilled ¹	41031246 41031426
Photodegradation water (161-2)	Passed NCS ²	41875023
Photodegradation soil (161-3)	Passed NCS ²	41875024
<u>Metabolism</u>		
Aerobic soil metab. (162-1)	Fulfilled ¹	41031247
Anaerobic soil metab. (162-2)	Fulfilled ¹	41031247
<u>Mobility</u>		
Leaching/ads./des. (163-1)	Fulfilled ¹	41031248
<u>Dissipation</u>		
Soil Dissipation (164-1)	Passed NCS ³	42053503 41875029
Soil Dissip.- Long-term (164-5)	Reserved	

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<u>Data Requirement</u>	<u>Status</u>	<u>MRID No.</u>
<u>Accumulation</u>		
Confined rotational crop (165-1)	NA ⁴	41875027
Field rotational crop (165-2)	NA	
Bioaccumulation in fish (165-4)	Passed NCS ⁵	41073509 42001101
Droplet size spectrum (201-1) and Drift field eval. (202-1)	Reserved ⁶	

¹ These data requirements are fulfilled. See EFGWB No. 90546, Oct. 12, 1989.

² Studies in support of these data requirements were submitted with the new chemical screen (NCS) package. These studies appear to be reviewable and passed the NCS screen.

³ The terrestrial field dissipation study submitted with the original NCS package was an interim study. A final report which appears to be reviewable was submitted. This study now passes the new chemical screen.

⁴ Accumulation in confined rotational crops are usually required for terrestrial food crop uses. In this case, however, this data requirement does not apply because the registrant seeks registration only for use on pecans and stone fruits. There are no crops rotated with these tree crops.

⁵ The original bioaccumulation in fish study submitted, which partially fulfills this data requirement, failed to identify some of the metabolites of the parent compound. Data pertaining to identification of these metabolites have been submitted. These data appear to be reviewable.

⁶ Information submitted with the original NCS package indicates that RH-7592 is toxic to fish and aquatic invertebrates. It is likely that droplet size spectrum and field drift evaluation data will be required.

Environmental Fate Assessment

At present there is insufficient information to make a comprehensive environmental fate assessment for RH-7592. However, based upon previously reviewed laboratory studies and supplemental information, RH-7592 is stable. The compound does not hydrolyze at pH values found in the environment. It is

metabolized slowly in soil under aerobic ($t_{1/2}$ = 285 and 367 days in silty clay loam and sandy loam soils, respectively) and anaerobic conditions ($t_{1/2}$ = 451 and 655 days in silty clay loam and sandy loam soils, respectively). RH-7592 and its degradation products appear to be slightly mobile to immobile in soil. It does not bioaccumulate in fish (maximum bioaccumulation factors were 170X, 50X, and 330X in whole fish, fillet, and viscera tissue, respectively) and 95-98% of accumulated residues were eliminated during a 14-day depuration period.

NOTE TO P.M.: The new chemical screen follow-up package received by EFGWB contained a study and raw data appendices which are not reviewed in EFGWB (Early life-stage toxicity to fathead minnow, MRID nos. 42041001 and 42041002). These documents are being returned to RD with this memorandum.

cc: Rose Mary Kearns, EFED

DP BARCODE: D170216

CASE: 006511
SUBMISSION: S405566

DATA PACKAGE RECORD
BEAN SHEET

DATE: 10/24/91
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 011 RESUB NEW CHEM SCRNG
CHEMICALS: 129011 RH-7592 22.8000%

ID#: 000707-EGR INDAR 2F AGRICULTURAL FUNGICIDE
COMPANY: 000707 ROHM & HAAS COMPANY
PRODUCT MANAGER: 22 CYNTHIA GILES-PARKER 703-557-8540 ROOM: CM2 251
PM TEAM REVIEWER: DOLPHINE WILSON 703-557-3483 ROOM: CM2 255
RECEIVED DATE: 10/11/91 DUE OUT DATE: 11/10/91

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 170216 EXPEDITE: N DATE SENT: 10/24/91 DATE RET.: / /
CHEMICAL: 129011 RH-7592
DP TYPE: 001 Submission Related Data Package
ADMIN DUE DATE: 11/07/91 CSF: N LABEL: N

ASSIGNED TO	DATE	IN	DATE	OUT
DIV : EFED	/	/	/	/
BRAN: EFGB	/	/	/	/
SECT: CRS1	/	/	/	/
REVR :	/	/	/	/
CONTR:	/	/	/	/

* * * DATA REVIEW INSTRUCTIONS * * *

Please do science screen on new chemical resubmission.
Attached are MRID Nos 42053503, 42001101 and 42041001-02.

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
170210	TSCB/IO	10/24/91	11/07/91	Y	N	N

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