Shaughnessy Number: 81901

Date out of EFGWB: MAR 2 1 1990

To: S. Stanton
Product Manager 41
Registration Division (H7505C)

From: Emil Regelman, Supervisory Chemist
Environmental Fate Review Section #2
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

Thru: Hank Jacoby, Chief
Environmental Fate and Ground Water Branch
Environmental Fate and Effects Division (H7507C)

Hank Jacoby 3/26/90

Attached, please find the EFGWB review of...

Reg./File #: 90-FL-07

Chemical Name: Chlorothalonil

Type Product: fungicide

Product Name: Bravo

Company Name: Fermenta (formerly Diamond Shamrock)

Purpose: emergency exemptiion (section 18) for use on mangoes

Date Received: 2/27/90

Action Code: 510

EFGWB#(s): 90-0415

Total Reviewing Time (decimal days): 0.5 Day

Deferrals to: ___Ecological Effects Branch, EFED

___Science Integration and Policy Staff, EFED

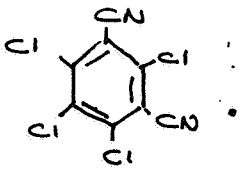
___Non-Dietary Exposure Branch, HED

___Dietary Exposure Branch, HED

___Toxicology Branch

1. CHEMICAL:

chemical name: 2,4,5,6-tetrachloroisophthalonitrile
common name: chlorothalonil
trade name: daconil
structure:



CAS #: 1897-45-6
Shaughnessy #: 081901

2. TEST MATERIAL: n.a.

3. STUDY/ACTION TYPE: special local need (section 18) on mangoes in Florida

4. STUDY IDENTIFICATION: n.a.

5. REVIEWED BY:

Typed Name: E. Brinson Conerly
Title: Chemist, Review Section 2
Organization: EFGWB/EFED/OPP

E. B. Conerly 3/21/90

6. APPROVED BY:

Typed Name: Emil Regelman
Title: Supervisory Chemist, Review Section 2
Organization: EFGWB/EFED/OPP

MAR 2 1 1990

7. CONCLUSIONS:

There is little in the EFGWB data base or in the submission to allow EFGWB to form a judgement about the magnitude of the additional environmental risk. A crucial piece of missing information is the relative amount of material already in use in the subject area, since it is labelled for a number of crops. Two of the five data requirements for an EUP, and several others required for full registration on food crops are unfulfilled. Available data depict a compound which is stable to hydrolysis and photolysis, but susceptible to metabolism under most conditions. Because **PARENT OR DEGRADATES MAY LEACH**, a ground water monitoring survey has been required.

8. RECOMMENDATIONS:

The product manager in RD should inform the registrant of the chemical to provide with all due speed the necessary studies and additional information to complete the data base.

If this emergency use exemption is granted, close attention should be given to the potential vulnerability of the ground and surface water in the area.

9. BACKGROUND:

The applicant wishes to treat a maximum of 2900 acres of Florida mango orchards with a maximum of 66,700 lb chlorothalonil. The application states that "no additional hazard would be anticipated".

The status of data requirements is as follows:

hydrolysis -- fulfilled, stable at pH 5 and 7, 10% degrades in 30 days at pH 9, with 2,4,5,6-tetrachloroisophthalimide as the sole degradate

photolysis in water -- **not** fulfilled -- additional data are required (per 1988 draft registration standard)-- the submitted study could be made acceptable, and indicates stability of chlorothalonil to photolysis

soil photodegradation -- **not** fulfilled -- required by 1988 draft registration standard

aerobic soil metabolism -- **not** fulfilled -- the applicant must provide an acceptable aerobic soil metabolism study according to Guidelines subpart N, establishing the patterns of disappearance of parent, appearance and disappearance of degradates, and identity of degradates

anaerobic soil metabolism -- fulfilled by submission of acceptable anaerobic aqueous metabolism

anaerobic aquatic metabolism -- fulfilled -- a half-life of 5-15 days, producing 4-OH-2,5,6-trichloro-isophthalonitrile, 3-CN-2,4,5,6,-tetrachlorobenzamide, 2-OH-5-CN-3,4,6-trichlorobenzamide, and 3-carboxy-2,5,6-trichlorobenzamide

leaching/adsorption/desorption -- fulfilled; lab studies indicate low leachability, but findings in ground water have triggered monitoring requirements. [k_ds of 3 for sand to 29 for silt in batch adsorption/desorption studies.]

terrestrial field dissipation -- **partially** fulfilled

confined accumulation on rotational crops -- fulfilled, field studies indicate the need for establishment of tolerances

fish bioaccumulation -- ~~discussed in this review~~ not fulfilled (See EEB 11/29/89)

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES: n.a.

11. COMPLETION OF ONE-LINER: no information added

12. CBI APPENDIX: n.a.