

US EPA ARCHIVE DOCUMENT

FEB 26 1987

Shaughnessy No.: 125301

Date Out of EAB: _____

To: Don stubbs
Product Manager 41
Registration Division (TS-767)

From: James D. Adams, Ph.D., Acting Chief
Review Section #1
Exposure Assessment Branch
Hazard Evaluation Division (TS-769)

JDA

Attached, please find the EAB review of...

Reg./File # : 87-AZ-03

Chemical Name: Fenoxycarb

Type Product : Insecticide

Product Name : LOGIC

Company Name : State of Arizona

Purpose : Emergency Exemption for use on Fire Ants

Action Code(s): 520

EAB #(s) : 70203

Date Received: 1/21/87

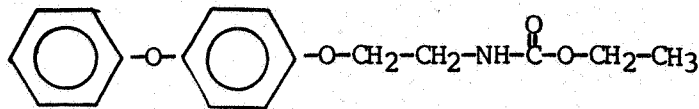
TAIS Code: _____

Date Completed: 2/11/87

Total Reviewing Time: 1.0 days

Deferrals to: _____ Ecological Effects Branch
_____ Residue Chemistry Branch
_____ Toxicology Branch

1.a CHEMICAL:



RO 13-5223/024

Fenoxycarb, LOGIC™

1.b Physical Properties: Reported in earlier reviews.

2. TEST MATERIAL: N/A

3. STUDY/ACTION TYPE:

Emergency Exemption for use on fire ants.

4. STUDY IDENTIFICATION: N/A

5. REVIEWED BY:

Akiva D. Abramovitch, Ph.D.
Chemist

Environmental Chemistry Review Section 1/EAB/HED/OPP

Akiva Abramovitch
Date: 2/11/87

6. APPROVED BY:

James D. Adams, Ph.D., Acting Chief
Supervisory Chemist

Environmental Chemistry Review Section 1/EAB/HED/OPP

Date: *James D. Adams*
2/26/87

7. CONCLUSIONS:

The following data requirements have been satisfied:

Hydrolysis:

Fenoxycarb is stable to hydrolysis at pH 3, 7 and 9 at 35°C and 50°C and no hydrolysis was detected during 7-10 weeks of incubation (EAB 12/13/83).

Aerobic Soil Metabolism:

Fenoxycarb degraded in soil with a half life of 2-3 months and 20% of its benzene ring was mineralized in 6 months (EAB 12/13/83).

Leaching:

Aged and unaged leaching studies indicate that fenoxycarb and its aged residues are not likely to leach and contaminate ground water. These conclusions are also supported by adsorption/desorption studies on four different soils in which Kd values of 18-77 were recorded (EAB 12/13/84).

Field Dissipation:

When applied at use rates, fenoxycarb residues were not recorded 3 days after application (EAB 11/30/84).

Fish Accumulation:

The EAB accepted the fish accumulation study in fulfillment of the data requirements. The data submitted indicated that the bioaccumulation factor for RO 13-5223 was 277.6 (whole fish), 138.9 (edibles) and 439.6 (non-edibles) but 99.0, 98.1 and 98.4% of the initially accumulated organic material was eliminated in two weeks of depuration. Most of the residual material (94%) in the edible portion was the parent RO 13-5223. The non-edible portion contained in addition to the parent compound (64%), some polar degradates of which hydroxylated metabolites were positively identified at less than 5%. The other highly polar and water soluble degradates were not identified. Based on the low use rates associated with the proposed fire ant bait use, potential for impact on aquatic systems and accumulation by aquatic organisms is low (EAB 7/28/85).

The data requirements have not been satisfied:

Photodegradation on Soil and Aqueous photodegradation -Sunlight conditions should be simulated.

8. RECOMMENDATIONS:

Based on the available data, fenoxycarb will degrade in soil and is not likely to contaminate ground water or bioaccumulate in fish. Therefore, EAB concurs with ground application.

Fenoxycarb is stable in water unless an acceptable aqueous photodegradation study demonstrates photodegradation.

The decision whether to allow air application should be addressed to other branches in HED, such as EEP, since we do not have acceptable information about potential drift.

9. BACKGROUND:

A. Introduction:

Please see April 25, 1985, memorandum on the registration standard on Fenoxycarb and earlier reports.

B. Directions for Use:

0.015 lb a.i./acre or 1.5 lb formulated product/acre over 650 acres of citrus + 120 acres of pasture + 60 acres of dairy feed in Mesa, Arizona.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES: N/A

No data included in this submission.

11. COMPLETION OF ONE LINER

No data included.

12. CBI APPENDIX

No CBI appendix in this review.