

FILE COPY

Shau. # 098301

Date Out EFB:

NOV 29 1982

To: Frank Sanders - Section Head
Product Manager 12
Registration Division (TS-767)

From: Emil Regelman, (Acting) Head
Review Section No. 1
Environmental Fate Branch
Hazard Evaluation Division (TS-769)

Attached please find the environmental fate review of:

Reg./File No.: FOTE

Chemical: Aldicarb

Type Product Insecticide/nematicide

Product Name: TEMIK

Company Name

Submission Purpose: Petition for emergency suspension of aldicarb uses
from Friends of the Earth.

ZBB Code: other

ACTION CODE: 425

Date In: 11/3/82

EFB # 43

Date Completed: NOV 29 1982

TAIS (level II)

Days

67

4

Deferrals To:

 Ecological Effects Branch

 Residue Chemistry Branch

 Toxicology Branch

1. INTRODUCTION

1.1 Frank Sanders, Section Head (PM-12), has asked EFB to review and comment on a petition for emergency suspension of TEMIK from Friends of the Earth (FOTE). EFB files contain a copy of a similar petition from FOTE dated December 12, 1979.

2. DISCUSSION

2.1 In this review, EFB is commenting only on those statements relating to the environmental fate of aldicarb.

- | | | |
|-------------------|-----|---|
| FOTE
Statement | (1) | "With regard to aldicarb, evidence from Wisconsin suggests that the pesticide does not break down in groundwater over time. Levels in Wisconsin seem to increase in time in the groundwater, rather than decrease which suggests a permanent contamination of aquifers." - from page 2. (Also see the submitted table titled "Contamination of Groundwater in Wisconsin" from page 4 of the petition. Copy attached). |
| EFB
Comment | (1) | The petitioner has submitted the results of one 1982 sampling time and claims that this shows an increase in groundwater contamination over time. In order to substantiate this claim, results of sampling over several years in previously sampled and previously unsampled wells are needed showing increase in aldicarb groundwater contamination over time. |
| FOTE
Statement | (2) | "The past experience with this chemical is that it cannot be kept out of the ground water even with label changes." - from page 5. |
| EFB
Comment | (2) | Certain label changes could conceivably result in no detectable aldicarb groundwater contamination or contamination at toxicologically insignificant levels. However, we have seen no field data supporting this assertion. |
| FOTE
Statement | (3) | "...the probability that Temik has contaminated the ground water in Florida is 100%." - from page 5. |
| EFB
Comment | (3) | Although we are aware of the press reporting groundwater contamination in Florida, EFB has received no data showing aldicarb contamination of Florida groundwater. EFB recommended that Union Carbide sample the more shallow of the two aquifers in Florida to support the claim of no groundwater contamination. Refer to the EFB review of the 1981 groundwater monitoring data dated May 10, 1982, sections 2.3, 3.3 and 4.1. |

CONTAMINATION OF GROUND WATER IN WISCONSIN

4.

Partial Report of Final Data
Pesticides in Groundwater, September 13, 1982

<u>Insecticides</u>	<u>SNARL (5)</u>	<u># Tested</u>	<u># Positives</u>	<u>Max. (ppb)</u>	<u>2nd Max. (ppb)</u>	<u>Min. (ppb)</u>	<u># Above SNARL</u>
Aldicarb ⁽⁴⁾ (Temik) Union Carbide	10 ppb ⁽³⁾	13	13	17	14	3	5
Disulfoton (Disyston) Mobay	1 ppb	13	12	100	90	8	11
Carbofuran (Furadan) Mobay	5 ppb	11	5	12	11	2	3
<u>Herbicides</u>							
Atrazine (Aatrex) Dow Chemical	12.5 ppb	12	10	74	58	13	10
Alachlor (Metribuzin) Mobay	25 ppb	11	3	6	4	2	-
Atrazine (Aatrex) Drexel	215 ppb	11	5	9	4	2	-
Linuron (Lertox) E.I. DuPont	62.5 ppb	11	1	3	-	-	-
Alachlor ⁽²⁾ (Alachlor) Monsanto	1000 ppb	11	0	-	-	-	-
<u>Fungicides</u>							
Bravo ⁽²⁾ (Chlorothalonil) Diamond Shamrock	150 ppb	11	0	-	-	-	-

1. Reported via letter dated September 13, 1982, Kenneth Kissler, EPA Beltsville Lab.

2. Reported together.

3. Advisory.

4. Aldicarb and Aldicarb Sulfone reported separately. These figures based upon sum.

5. From Wisconsin DHSS

FOTE (4) "We petition EPA to issue an emergency suspension
Statement of the registration of aldicarb until the manu-
facturer can find a way to make it non-soluble
in water, so that the groundwater is not contam-
inated with this chemical." - from page 6.

Also,

"We have petitioned you to issue an emergency
suspension of the registration of aldicarb
until the manufacturer can develop a product that
is not systemic (contaminating the crop and food
product) and that is not water soluble (contam-
inating the drinking water)." - from page 7.

EFB (4) In these statements, FOTE is not only asking
Comment that aldicarb be made non-soluble in water and
non-systemic but that it be made non-efficacious
also. The request is like removing a fish's
fins and then asking it to swim! Aldicarb works
by being water soluble, leaching to the root
zone (where it controls the nematodes), being
taken up by the roots and being translocated
(systemically) throughout the plant (thereby
controlling insects that suck the plant juices).

FOTE (5) "We petition E.P.A. to develop a ground water
Statement purity and safety strategy for all pesticides
including aldicarb, to forbid the use of chem-
icals that are excessively water soluble." - from
page 7.

EFB (5) Does FOTE suggest forbidding registration of
Comment pesticides based only on water solubility? If
so, then use of diquat and paraquat, which are
freely soluble in water but do not leach, would
have to be canceled. So would the relatively
water soluble pesticides acifluorfen, alar,
amitrole, difenzoquat, bentazon, sulfuric acid
and many others which, due to many factors, do
not result in groundwater contamination. It
appears FOTE should also include leachability,
toxicology, soil stability, application rate,
application timing and geographical use area
in their formula for forbidding use of pesticide
chemicals.



Samuel M. Creeger
November 29, 1982
Section #1/EFB
Hazard Evaluation Division

REGISTRATION DIVISION DATA REVIEW RECORD

Confidential Business Information - Does Not Contain National Security Information (E.O. 12065)

4942
11-3-82

1. CHEMICAL NAME <div style="font-size: 1.5em; font-family: cursive;">ALDICARB</div>			
2. IDENTIFYING NUMBER <div style="font-size: 1.5em; font-family: cursive;">FOTE</div>	3. ACTION CODE <div style="font-size: 1.5em; font-family: cursive;">425</div>	4. ACCESSION NUMBER	TO BE COMPLETED BY PM
			5. RECORD NUMBER <div style="font-size: 1.5em; font-family: cursive;">82320</div>
			6. REFERENCE NUMBER
			7. DATE RECEIVED (EPAI) <div style="font-size: 1.5em; font-family: cursive;">10-14-82</div>
			8. STATUTORY DUE DATE
			9. PRODUCT MANAGER (PM) <div style="font-size: 1.5em; font-family: cursive;">Sanders</div>
			10. PM TEAM NUMBER <div style="font-size: 1.5em; font-family: cursive;">Section Head (PM-12)</div>

14. CHECK IF APPLICABLE		TO BE COMPLETED BY PCB	
<input type="checkbox"/> Public Health/Quarantine	<input type="checkbox"/> Minor Use	11. DATE SENT TO HED/TSS <div style="font-size: 1.5em; font-family: cursive;">11/3/82</div>	
<input type="checkbox"/> Substitute Chemical	<input type="checkbox"/> Part of IPM	12. PRIORITY NUMBER <div style="font-size: 1.5em; font-family: cursive;">20</div>	
<input type="checkbox"/> Seasonal Concern	<input type="checkbox"/> Review Requires Less Than 4 Hours	13. PROJECTED RETURN DATE <div style="font-size: 1.5em; font-family: cursive;">12/3/82</div>	

15. INSTRUCTIONS TO REVIEWER <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> A. HED <input type="checkbox"/> Total Assessment - 3(c)(5) <input type="checkbox"/> Incremental Risk Assessment - 3(c)(7) and/or E.L. Johnson memo of May 12, 1977. </div> <div style="width: 48%;"> C. <input type="checkbox"/> BPSD D. <input type="checkbox"/> TSS/RO E. <input checked="" type="checkbox"/> Other </div> </div> <div style="margin-top: 10px;"> B. SPRD <input type="checkbox"/> Send Copy of Form to SPRD PM) <input type="checkbox"/> Chemical Undergoing Active RPAR Review <input type="checkbox"/> Chemical Undergoing Active Registration Standards Review </div>	F. INSTRUCTIONS <div style="font-size: 1.5em; font-family: cursive; padding: 10px;"> Please review the attached information and forward your comments by C.O.B Dec. 2, 1982 </div>
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6. RELATED ACTIONS

7. 3(c)(1)(D)		18. REVIEWS SENT TO							
<input type="checkbox"/> Use Any or All Available Information <input type="checkbox"/> Use Only Attached Data <input type="checkbox"/> Use Only the Attached Data for Formulation and Any or All Available Information on the Technical or Manufacturing Chemical.		<input type="checkbox"/> TB <input type="checkbox"/> EEB <input type="checkbox"/> EF <input type="checkbox"/> PL <input type="checkbox"/> PCB <input type="checkbox"/> EFB <input type="checkbox"/> CH <input type="checkbox"/> BPSD							
To	TYPE OF REVIEW	NUMBER OF ACTIONS							
		Registration	Petition	EUP	SLN	Sec. 18	Inert	MNR. USE	Other
	TOXICOLOGY								
	ECOLOGICAL EFFECTS								
	RESIDUE CHEMISTRY								
	ENVIRONMENTAL DATA								
	CHEMISTRY								
	EFFICACY								
	PRECAUTIONARY LABELING								
	ECONOMIC ANALYSIS								