US EPA ARCHIVE DOCUMENT

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Date Out of EFGWB: NOV 12 1991

TO: Joanne Miller
Product Manager 23
Registration Division (H7505C)

FROM: Elizabeth Behl, Acting Section Chief
Ground-Water Technology Section
Environmental Fate & Ground-Water Branch/EFED (H7507C)

THRU: Henry Jacoby, Chief
Environmental Fate & Ground-Water Branch/EFED (H7507C)

Attached, please find the EFGWB review of:

Reg./File #: 100-587

Chemical Name: Metolachlor

Type Product: Herbicide

Company Name: CIBA-GEIGY Corporation

Purposes: Review of the detections of metolachlor in Wisconsin and South Dakota

Date Received by EFGWB: 4/23/91

ACTION CODE: 405 Adverse 6 (a) (2)

Date Completed: 11/7/91 EFGWB #(s): 910527
Monitoring study requested: x Total Review Time: 0.5 day

Monitoring study voluntarily: ___

Deferrals To: ___ Ecological Effects Branch, EFED

___ Science Integration & Policy Staff, EFED

___ Occupational & Residential Exposure Branch, HED

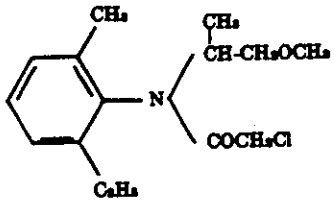
___ Chemistry Branch, HED

___ Toxicology Branch, HED

1. CHEMICAL:

Chemical name: 2-Chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)acetamide

Common name: Metolachlor
Trade name: Dual
Structure:



2. TEST MATERIAL:

Metolachlor

3. STUDY/ACTION TYPE

Review of the detections of metolachlor in ground water in Wisconsin and South Dakota.

4. STUDY IDENTIFICATION:

Title: Findings of metolachlor in monitoring wells in Wisconsin and South Dakota.

Submitted by: Karen S. Stumpf
CIBA-GEIGY Corporation
P.O. Box 18300
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5. REVIEWED BY:

Larry Liu, Ph.D. Signature: Larry Liu
Environmental Scientist
OPP/EFED/EFGWB/Ground-Water Section Date: 11/7/91

6. APPROVED BY:

Elizabeth Behl Signature: Dennis A Wells for EB
Acting Section Chief
OPP/EFED/EFGWB/Ground-Water Section Date: 11/7/91

7. CONCLUSIONS:

High levels of metolachlor were detected in ground water at dealer locations in 3 counties in Wisconsin and one county in South Dakota. It appears that the detections are due to point sources rather than the result of leaching from normal

agricultural applications. The registrant has collected additional samples from these contaminated wells and the domestic wells downgradient the contaminated wells for analysis. Results will be submitted to the Agency.

8. RECOMMENDATIONS:

(1). The registrant should submit any available information about the wells with detections to the Agency. Information that we would find useful includes: number of wells investigated, number of wells with detections, depth of water table, depth of the well, ground-water flow direction, spill or disposal in the past, well construction, the type of water use (such as for irrigation or drinking).

(2). We would recommend the registrant sample nearby drinking wells at each of the sites for possible ground-water contamination.

(3). The registrant reports that 'No drinking water wells' are affected at the Dane and Eau Claire Counties, Wisconsin and that pesticide levels are declining at the Eau Claire County, Wisconsin site. We would like to request the registrant provide any data supporting these statements.

9. BACKGROUND:

Metolachlor is a widely used herbicide for weed control in corn and soybean. Other uses include cotton, nonbearing citrus, nonbearing grapes, peanuts, pod crops, potatoes, safflowers, grain or forage sorghum, stone fruits, tree nuts, and woody ornamentals. Metolachlor is manufactured and marketed by CIBA-GEIGY Corp. under the trade name Dual. Metolachlor is also used in combination with atrazine under the trade name Bicep. Bicep is used to control weeds in corn and grain or forage sorghum.

Metolachlor has been identified in limited sampling of ground water and there is the possibility that it may leach through the soil to ground water, especially where soils are coarse and ground water is near the surface. Therefore, a ground-water monitoring requirement was specified in the Metolachlor Reregistration Guidance package, issued in January, 1987. According to this reregistration guidance, "studies must be designed and conducted to determine the means and extent of metolachlor's potential to leach to ground water".

10. DISCUSSION:

The purpose of this review is to comment the high detections of metolachlor in ground waters in 3 counties in Wisconsin and one

county in South Dakota. Due to the lack of detailed information, discussion by the Agency is limited.

Findings of metolachlor in the ground water at the pesticide dealer locations in south Dakota and Wisconsin are summarized below:

State	County	No. of Wells Studied	No. of Wells With Detections	Metolachlor Found, ppb
SD	Madison	1*	na	25-2,183
WI	Dane	several	na	12-3,500
	Eau Claire	several	na	12-3,500
	Portage	4	4	24-6,926

Notes: * - This number is questionable.
na - Not available.

CIBA-GEIGY followed up the findings in Portage County, Wisconsin by taking samples for confirmation. Results show that only one of the 4 wells had levels of metolachlor above H.A. of 100 ppb (i.e. 147 ppb). The levels of metolachlor in the other 3 wells were below 100 ppb, but no specific concentration levels were given.

The registrant has taken samples from the sites in Dane and Eau Claire Counties, Wisconsin and Madison County, South Dakota. CIBA-GEIGY has agreed to provide additional information to the Agency when available.

Levels of metolachlor detections in the ground-water samples at the dealer locations are much higher than those reported in the "A Large-Scale Retrospective Ground-Water Study for Metolachlor in Four States (GA, IL, IA, and WI)". This retrospective ground-water study is currently under review (MRID 41284601).