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To: Robert Taylor
Product Manager PM 25
Registration Division (H7507C)

From: Elizabeth Behl, Head (acting)
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 # : _____

Chemical Name : Atrazine

Type Product : Herbicide

Product Name : AAtrex

Company Name : CIBA-GEIGY Corporation

Purpose : Review of the detections of atrazine and metolachlor in ground water in Wisconsin
Action Code : 405 Adverse 6(a)(2) EFGWB #(s): 920321 Total Review Time: 0.5 days

EFGWB Guideline/MRID Summary Table: The review in this package contains...									
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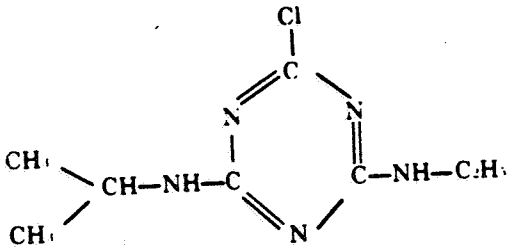
161-2		162-2		164-2		165-2		166-2	
161-3		162-3		164-3		165-3		166-3	
161-4		162-4		164-4		165-4		167-1	
201-1		163-1		164-5		165-5		167-2	
202-1		163-3							

1. CHEMICAL:

Chemical name: 2-Chloro-4-ethylamino-6-isopropylamino-S-triazine

Common name: Atrazine
Trade name: AAtrex
Structure:



2. TEST MATERIAL:

Atrazine

3. STUDY/ACTION TYPE

Review of the detections of atrazine and metolachlor in ground water in Wisconsin (MRID 42116101).

4. STUDY IDENTIFICATION:

Title: Reports of Findings of Atrazine and Metolachlor in Ground Water.

Submitted by: Karen S. Stumpf
CIBA-GEIGY Corporation
P.O. Box 18300
Greensboro, NC 27419

5. REVIEWED BY:

Larry Liu, Ph.D. Signature: Larry Liu
Environmental Scientist
OPP/EFED/EFGWB/Ground-Water Section Date: 1-15-92

6. APPROVED BY:

Elizabeth Behl Signature: D. Wolf for EB
Acting Section Chief
OPP/EFED/EFGWB/Ground-Water Section Date: 1-15-92

7. CONCLUSIONS:

Two herbicides manufactured by CIBA-GEIGY (atrazine and metolachlor) were detected in ground water in Wisconsin. Both herbicides were detected above the established HAL's.

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: reasons for investigation, well location, pesticide use and cropping history in the vicinity of the wells with detections, 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 wells at the site for possible ground-water contamination.

(3). Regardless of manufacturers, the registrant should submit all findings of the investigations to the Agency. The following data must be submitted: (1) the level of atrazine detection in the well in Walworth County, Wisconsin; and (2) the names and detection levels of the chemicals manufactured by other registrants.

9. BACKGROUND:

Atrazine has been registered since 1959 and has been used intensively in the United States since the early 1960's. There is some evidence that atrazine use has been declining in recent years, but it is still among the two or three most heavily used pesticides in the country, with annual use of 80-90 million pounds. Atrazine is also the primary pesticide used on corn. In the United States, atrazine use is primarily on field corn (86%), sorghum (10%), sugarcane (1.5%), and pasture (1%).

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.

Due to the classification of atrazine as a C carcinogen and the growing awareness of pesticide-contaminated ground water, since 1988 EPA has discussed the merits of placing it into Special

Review. The assessment of atrazine in ground and surface water is still in progress.

10. DISCUSSION:

The purpose of this review is to comment on the detections of two herbicides (atrazine and metolachlor) in the ground water in Wisconsin. Due to the lack of detailed information (such as well location, site description, pesticide use history, type of water use), discussion by the Agency is limited.

Wisconsin DATCP (Department of Agriculture, Trade and Consumer Protection) and DNR (Department of Natural Resources) reported that eight pesticide dealer/large grower locations showed ground-water contamination at levels above HAL for several pesticides (including atrazine and metolachlor). However, levels of pesticide residues were not reported. CIBA-GEIGY has expressed their intention to investigate these sites.

CIBA-GEIGY is in the process of analyzing additional ground-water samples at a pesticide dealer site in Walworth County, Wisconsin. The State of Wisconsin reported atrazine residues (21.3 ppb) were detected in two wells at the site. It is not clear whether these two wells were included in the report released by Wisconsin DATCP and DNR.

According to the report "A Report on Atrazine Detections in Wisconsin Ground Water" recently released from the Wisconsin DATCP, atrazine residues were found in the ground water at 27 locations at a concentration range of 3.5-27.7 ppb. CIBA-GEIGY is attempting to initiate site investigation.

Monitoring of three wells at a dealer location in Plover, Wisconsin reported continuing high levels of atrazine (1,102 ppb) and metolachlor (4,893 ppb) in one well. A consultant is working with the pesticide dealer and the state to determine the cause of the contamination as well as remediation alternatives.

Wisconsin has been ranked the number 1 state for the dairy production and the number 7 for the corn production in the United States (Agricultural Statistics, 1983 and Census of Agriculture, 1987). Corn herbicides (such as atrazine and metolachlor) are very widely used in Wisconsin.

References:

Agricultural Statistics. 1983. U.S. Department of Agriculture.

Census of Agriculture. 1987. Volume 1. Geographic Area Series; Part 51. United States-Summary and State Data. U.S. Department of Commerce.