Larry Firc

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Shaughnessy Number: ~~10880~~

Date Out of EFGWB: DEC 18 1991

TO: Robert Taylor
Product Manager 25
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 #: 100-521

Chemical Name: Atrazine

Type Product: Herbicide

Company Name: CIBA-GEIGY Corporation

Purposes: Review of the detections of CIBA-GEIGY chemicals (atrazine and simazine) in ground water in North Carolina

Date Received by EFGWB: 11/18/91

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

Date Completed: 11/20/91 EFGWB #(s): 920202

Monitoring study requested: ____ Total Review Time: 0.5 day

Monitoring study voluntarily: ___

Deferrals to:

_____ EEB/EFED _____ SIPS/EFED _____ OREB/HED

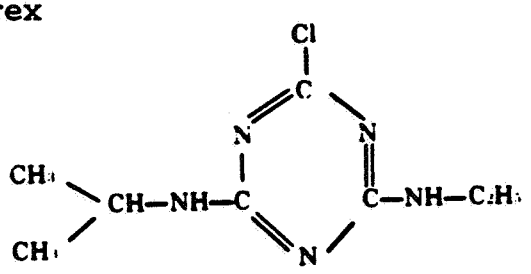
_____ TB1/HED _____ TB2/HED _____ CB1/HED

_____ CB2/HED

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 simazine in ground water in North Carolina.

4. STUDY IDENTIFICATION:

Title: Reports of Findings of Atrazine and Simazine 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: 12/17/91

6. APPROVED BY:

Elizabeth Behl Signature: Dr Wells for EB
Acting Section Chief
OPP/EFED/EFGWB/Ground-Water Section Date: 12/17/91

7. CONCLUSIONS:

Two herbicides manufactured by CIBA-GEIGY (atrazine and simazine) were detected in ground water in Avery County, North Carolina. Both herbicides were detected above the established HAL's.

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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.

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%).

Simazine is used for the control of most annual grasses and broadleaf weeds in corn, alfalfa, Bermudagrass, cherries, peaches, citrus, cranberries, grapes, apples, pears, certain nuts, asparagus, certain ornamental and tree nursery stock, and in turf grass sod production.

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 simazine) in a well in Avery County, North Carolina. Due to the lack of detailed information (such as pesticide use history, site description, type of water use), discussion by the Agency is limited.

Findings are summarized below:

State (County)	# of Wells	Chemicals Detected	Health Advisory Level, ppb	Concentration ppb
NC (Avery)	1	atrazine	3	7
		simazine	1	8

Atrazine residues of 7 ppb, which exceeded the HAL of 3 ppb, were detected. Another triazine herbicide (simazine) was also detected with a residue level of 8 ppb.

Based on the available information, this well is located at a grower site. CIBA-GEIGY could not identify any known source of contamination. In October 1991, the registrant initiated its own investigation in cooperation with the state Department of Natural Resources and the Department of Agriculture. State officials have advised the owner not to drink the water from this well.

Avery County is not a major crop production county in North Carolina. The total cropland is approximately 8,000 acres (Census of Agriculture, 1987). The most important crops are tobacco and hay in Avery County.

Reference:

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