Shaughnessy No.: 108801
DP Barcode: D190875
Case: 284660
Submission: S440056
Date Out of EFGWB: 6/29/93

TO: R. Taylor
W. Allen
Product Manager #25
Registration Division (H7505C)

FROM: Henry Nelson, Ph.D., Head H Nelson
Surface Water Section
Environmental Fate and Groundwater Branch/EFED (H7507C)

THRU: Hank Jacoby, Chief Henry Jacoby
Environmental Fate and Groundwater Branch
Environmental Fate and Effects Division (H7507C)

Attached, please find the EFGWB review of:

Reg./File #(s): _____

Common Names: Metolachlor / Cyanazine

Type of Product: Herbicide

Product Name: _____

Company Name: DuPont

Purpose: Review of FIFRA 6(a)(2) surface water monitoring data
427712-01

Action Code: 405

EFGWB #(s): 93-0781

Total Review Time: 0.5 day

This review is of data (427513-01) on the concentrations of metolachlor, atrazine, and cyanazine in 4 finished water samples collected in June and July 1990. The data summary was submitted by CIBA-GEIGY in compliance with FIFRA 6(a)(2).

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1. CHEMICAL:
Common Name: Metolachlor
Chemical Name:
Type of Product: Herbicide

Chemical Structure:

Physical/Chemical Properties
Molecular Weight: 283.5
Physical State :
Aqueous Solubility: 530 mg/L @ 20_oC
Vapor Pressure: 1.3 X 10^{-5} torr
Log Octanol/Water Partition Coefficient

2. TEST MATERIALS:
Not applicable.

3. STUDY/ACTION TYPE:
Review of FIFRA 6(a)(2) surface water monitoring data.

4. STUDY IDENTIFICATION:

D190875/427513-01: Data on the concentrations of metolachlor, atrazine, and cyanazine in Raisin River samples. In a letter dated 4/20/93 from K. Stumpf of CIBA-GEIGY to R. Taylor of RD/OPP.

5. REVIEWED BY:
Henry Nelson, Ph.D., Head H Nelson
Surface Water Section
Environmental Fate and Groundwater Branch/EFED

6. APPROVED BY:
Hank Jacoby, Chief Henry Jacoby
Environmental Fate and Groundwater Branch
Environmental Fate and Effects Division/OPP

7. CONCLUSIONS:

(1) Annual average pesticide concentrations in finished water exceeding the MCL and individual pesticide concentrations in finished water exceeding 4 X MCL constitute violations of the Safe Drinking Water Act (SWDA). Annual average concentrations exceeding the MCLG or lifetime HA and individual concentrations exceeding 4 X the MCLG or 4 X lifetime HA for unregulated pesticides constitute potential future violations of the SDWA if the MCLGs or lifetime HAs for unregulated pesticides become their MCLs when they become regulated. For pesticides with low soil/water partition coefficients such as metolachlor, atrazine, and cyanazine, such concentrations in raw water also represent potential violations in finished water since such compounds are not effectively removed by the typical primary treatment methods of public water supplies.

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(2) As shown in the letter, 4 samples were collected in June or July 1990, one from ech of 4 community water systems supplied by the raisin river.

(3) Metolachlor was detected in one of the samples at 12 ug/L which is well below both 4 X the lifetime HA (400 ug/L) and the lifetime HA (100 ug/L).

(4) Atrazine was detected in all 4 samples at concentrations ranging from 1.0 to 7.0 ug/L. Two of the samples had atrazine concentrations equaling or exceeding the MCL of 3 ug/L (3 ug/L and 7 ug/L), but none exceeded 4 X the MCL (12 ug/L).

(5) Cyanazine was detected in one of the samples (collected from the Adrian, MI Public Water Supply System) at 5 ug/L which exceeds both the MCLG (1 ug/L) and 4 X the MCLG (4 ug/L). This cyanazine concentration was also reported by DuPont (see D190985/427284-01).

8. RECOMMENDATIONS: If possible, set up a procedure by which the Office of Drinking Water notifies the Office of Pesticides of any violations or potential future violations (e.g., cyanazine is not yet a regulated pesticide, but soon will be) of the Safe Drinking Water Act by pesticides, and a procedure for OPP obtaining such data.

9. BACKGROUND:

This review is of data (425772-01) on the concentrations of cyanazine, atrazine, alachlor, metolachlor, and trifluralin in samples collected in the Springs of 1991 and 1992 from 122 and 80 IL surface source water supply systems, respectively. The data summary was submitted by DuPont in compliance with FIFRA 6(a)(2).

10. DISCUSSION:
See conclusions

11. COMPLETION OF ONE-LINER
Not applicable

12. CBI INDEX:
Not applicable.

DP BARCODE: D190875

CASE: 284660 DATA PACKAGE RECORD DATE: 05/03/93
SUBMISSION: S440056 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: MISCELLANEOUS ACTION: 405 6(A)(2) ADVERSE DATA
CHEMICALS: 108801 Metolachlor (ANSI) %
100101 Cyanazine 10.0000%
080803 Atrazine (ANSI) 0.0000%

ID#: 284660
COMPANY:
PRODUCT MANAGER: 25 ROBERT TAYLOR 703-305-6800 ROOM: CM2 241
PM TEAM REVIEWER: WESLEY ALLEN 703-305-5706 ROOM: CM2 251
RECEIVED DATE: 04/27/93 DUE OUT DATE: 07/06/93

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 190875 EXPEDITE: N DATE SENT: 05/03/93 DATE RET.: / /
CHEMICAL: 108801 Metolachlor (ANSI)
DP TYPE: 001 Submission Related Data Package
ADMIN DUE DATE: 05/28/93 CSF: N LABEL: N 6/28

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	/ /	/ /
BRAN: EFGB	/ /	/ /
SECT: SWS	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

93-0781

* * * DATA REVIEW INSTRUCTIONS * * *

PLEASE REVIEW THIS SUBMISSION ON SURFACE WATER DECTION
IN LENAWEE COUNTY, MICH.
ATTN HENERY NELSON MERID.42713-01

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

Agricultural Division
CIBA-GEIGY Corporation
P.O. Box 18300
Greensboro, North Carolina 27419-8300
Telephone 919 632 6000

CIBA–GEIGY

PM Copy

Certified Mail

April 20, 1993

427513-01

284660

Document Processing Desk [6(a)(2)]
Office of Pesticide Programs (H7504C)
U.S. Environmental Protection Agency
401 M. Street, S.W.
Washington, D.C. 20460

Attn: Mr. Robert J. Taylor, PM 25

Dear Mr. Taylor:

SUBJECT: SURFACE WATER DETECTIONS IN RIVER RAISIN, LENAWEE COUNTY, MICHIGAN

Recently, a Ciba Plant Protection representative attended a meeting regarding the detection of several agricultural chemicals in the River Raisin. Also attending were representatives of the Michigan Department of Agriculture, County Extension Service, SCC District, County Ag Council, and Monsanto.

The following is a summary of the data on findings of atrazine and metolachlor. For other findings, the Michigan Department of Agriculture should be contacted.

Site*	Date	Pesticide Detected	Amount (ppb)
AG460003	6/21/90	Atrazine	1.0
AG460004	6/14/90	Atrazine	2.0
AG460005	6/14/90	Metolachlor	12.0
AG460005	6/14/90	Cyanazine**	5.0
AG460005	6/14/90	Atrazine	7.0
AG580002	7/2/90	Atrazine	3.0

*AG460003 - Deerfield Public Water Supply
AG460004 - Blissfield Public Water Supply
AG460005 - Adrian Public Water Supply
AG580002 - Dundee Public Water Supply

**Reported because Ciba has a registered herbicide, Cycle, which contains cyanazine as one of its active ingredients.

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The samples reported above were taken in 1990. Monitoring since that time has shown that although there are seasonal peaks in the findings, the annual averages are below the MCL or HAL's for affected products.

For more information, contact the Michigan Department of Agriculture.

Sincerely,

Karen S. Stumpf
Senior Regulatory Manager
Regulatory Affairs