

US EPA ARCHIVE DOCUMENT

Shaughnessy No.: 080803  
DP Barcode: D173509  
Case: 283151  
Submission: S410248  
Date Out of EFGWB: March 3, 1992

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

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

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

Attached, please find the EFGWB review of:

Reg./File #(s): 080803-0

Common Names: Atrazine

Type of Product: Herbicide

Product Name: \_\_\_\_\_

Company Name: CIBA-GEIGY

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

Action Code: 405

EFGWB #(s): 92-0467

Total Review Time: 0.5 day

This review is of data on the concentrations of atrazine, atrazine degradates, and metalochlor in water and sediment samples collected April-December 1990 from 18 locations in Rathburn Reservoir in Iowa. The data were submitted by CIBA-GEIGY in compliance with FIFRA 6(2)(a).

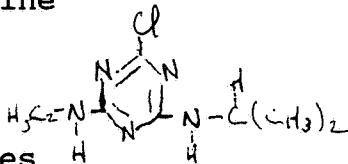
1. CHEMICAL:

Common Name: Atrazine

Chemical Name: 2-Chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine

Type of Product: Herbicide

Chemical Structure:



Physical/Chemical Properties

Molecular Weight: 354

Physical State : White crystalline solid

Aqueous Solubility: 70 mg/L @ 22°C

Vapor Pressure: 3.0 X 10<sup>-7</sup> mm Hg

Log Octanol/Water Partition Coefficient 2.33 to 2.71

2. TEST MATERIALS:

Not applicable.

3. STUDY/ACTION TYPE:

Review of FIFRA 6(a)(2) surface water monitoring data.

4. STUDY IDENTIFICATION:

D173509/421668-01: Letter dated 1/3/92 from K. Stumpf of CIBA-GEIGY to R. Taylor of RD/OPP.

5. REVIEWED BY:

Henry Nelson, Ph.D., Acting Section Head *H Nelson*  
Surface Water Section  
Environmental Fate and Groundwater Branch/EFED

6. APPROVED BY:

Hank Jacoby, Chief  
Environmental Fate and Groundwater Branch  
Environmental Fate and Effects Division/OPP

7. CONCLUSIONS:

(1) None of the 18 water samples collected from Rathburn Reservoir on April 10, 1990 had atrazine concentrations exceeding the MCL (3 ug/L). However, 9 of the 20 water samples collected on 6/6/90, 18 of the 20 water samples collected on 7/30/90, 17 of the 19 water samples collected on 11/1/90, and 17 of the 20 water samples collected on 12/11/90 had atrazine concentrations exceeding the MCL ranging from 3.4 to 13.7 ug/L.

(2) Average atrazine concentrations exceeded the MCL of 3 ug/L on each day except 4/10/90. Average atrazine concentrations in water samples were 0.9 ug/L for the 18 collected on 4/10/90, 3.8 ug/L for the 20 collected on 6/6/90, 4.9 ug/L for the 20 collected on 7/30/90, 4.2 ug/L for the 19 collected on 11/1/90, and 4.3 ug/L for the 20 collected on 12/11/90. The overall average atrazine concentration of 3.7 ug/L also exceeded the MCL.

(3) The atrazine degradate G-30033 (2-amino-4-chloro-6-isopropylamino-s-triazine) was detected in 74 of the 77 water samples for which it was analyzed at concentrations up to 1.35 ug/L. The atrazine degradate G-28279 (2-amino-4-chloro-6-ethylamino-s-triazine) was detected in 51 of the 58 water samples for which it was analyzed at concentrations up to 1.03 ug/L.

(4) Atrazine concentrations exceeding the MCL (3 ug/L) are frequently reported for some surface water samples collected from numerous locations in the corn belt in late April through June. However, atrazine concentrations in those locations generally decline to below 1 ug/L by the late summer or early fall and remain below 1 ug/L through early spring. It is unusual for samples collected in November and December (such as those from Rathburn Reservoir) to have atrazine concentrations exceeding the MCL.

(6) The results of the analyses were attached by CIBA-GEIGY to their 1/3/92 letter. No information was provided on the hydrological characteristics of the lake or on the sampling, analytical, or QA/QC methodologies employed. Therefore, EFGWB cannot verify the representativeness or accuracy of the data, nor speculate on the causes of the relatively high levels of atrazine contamination. However, according to the letter, CIBA-GEIGY is preparing a final report which will presumably include such information.

(7) Data on the concentrations of metalochlor in water, and on the concentrations of atrazine, atrazine degradates, and metalochlor were also submitted, but will be reviewed later when the final report is submitted. Other data on atrazine concentrations in Rathburn Reservoir is reviewed in EFGWB #

8. RECOMMENDATIONS:

CIBA-GEIGY should provide the information cited as missing in item #6 of the conclusions section when they submit the final monitoring report.

9. BACKGROUND:

This review is of data on the concentrations of atrazine, atrazine degradates, and metalochlor in water and sediment samples collected April-December 1990 from 18 locations in Rathburn Reservoir in Iowa. The data were submitted by CIBA-GEIGY in compliance with FIFRA 6(2)(a).

10. DISCUSSION:

See conclusions.

11. COMPLETION OF ONE-LINER

Not applicable

12. CBI INDEX: Not applicable.

DP BARCODE: D173509

CASE: 283151  
SUBMISSION: S410248

DATA PACKAGE RECORD  
BEAN SHEET

DATE: 01/24/92  
Page 1 of 1

\* \* \* CASE/SUBMISSION INFORMATION \* \* \*

CASE TYPE: MISCELLANEOUS ACTION: 405 DATA-ADVERSE DATA  
CHEMICALS: 080803 Atrazine ( 2-chloro-4-(ethylamino)-6-(isopropylami 0.0000%

108801 Metolachlor ( 2-chloro-N-(2-ethyl-6-methylphenyl)- 0.0000%

ID#: 283151

COMPANY: CIBA-GEIGY CORP.

PRODUCT MANAGER: 25 ROBERT TAYLOR

703-305-6800 ROOM: CM2 241

PM TEAM REVIEWER: JAMES MORRILL

703-305-5705 ROOM: CM2 251

RECEIVED DATE: 01/13/92

DUE OUT DATE: 03/23/92

\* \* \* DATA PACKAGE INFORMATION \* \* \*

DP BARCODE: 173509 EXPEDITE: N DATE SENT: 01/24/92 DATE RET.: / /  
CHEMICAL: 080803 Atrazine ( 2-chloro-4-(ethylamino)-6-(isopropylamino)-s-tri  
DP TYPE: 001 Submission Related Data Package

ADMIN DUE DATE: 02/18/92

CSF: N

LABEL: N

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	01/29/92	/ /
BRAN: EFGB	/ /	/ /
SECT: GTS	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

\* \* \* DATA REVIEW INSTRUCTIONS \* \* \*

Please review attached 6(a)(2) report (MRID# 421668-01) of atrazine and metolachlor in Rathburn Reservoir, Iowa (surface water).

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

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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EFG #: 0467

Page \_\_\_\_\_ is not included in this copy.

Pages 5 through 18 are not included.

The material not included contains the following type of information:

- Identity of product inert ingredients.
- Identity of product impurities.
- Description of the product manufacturing process.
- Description of quality control procedures.
- Identity of the source of product ingredients.
- Sales or other commercial/financial information.
- A draft product label.
- The product confidential statement of formula.
- Information about a pending registration action.
- FIFRA registration data.
- The document is a duplicate of page(s) \_\_\_\_\_.
- The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.