Shaughnessy No.: 080803
DP Barcode: D173513
Case: 282977
Submission: S410259
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
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): 92-0468

Total Review Time: 0.5 day

This review is of a summary of data (421667-01) on the concentrations of atrazine and cyanazine in samples collected August-September1991 from West Lake which is the primary source of drinking water for Osceola, Iowa. The data summary was submitted by CIBA-GEIGY in compliance with FIFRA 6(2)(a).

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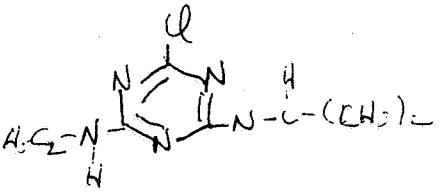
1. CHEMICAL:
Common Name: Atrazine
Chemical Name: 2-Chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine
Type of Product: Herbicide

Chemical Structure:



Physical/Chemical Properties
Molecular Weight: 354
Physical State : White crystalline solid
Aqueous Solubility: 70 mg/L @ 22_0C
Vapor Pressure: 3.0 X 10_{-7} 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:

D173513/421667-01: 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) One raw and one finished water sample were collected from West Lake in August and September 1991. All 4 of the samples (2 raw, 2 finished) had atrazine concentrations exceeding the MCL (3 ug/L) ranging from 5.4 to 9.3 ug/L.

(2) Three atrazine degradates (desethyl-atrazine, desisopropyl-atrazine, and desalkyl-atrazine) were detected in all 4 samples at concentrations ranging from 1.0 to 1.7 ug/L.

(3) All 4 of the samples had cyanazine concentratrations exceeding the lifetime drinking water HA for cyanazine (10 ug/L). (No MCL has yet been established for cyanazine, but the Office of Drinking Water frequently ends up setting the MCL equal to the lifetime drinking water HA).

(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 somewhat unusual for samples collected in August and September to have atrazine concentrations exceeding the MCL such as those from West Lake.

(5) The results of the analyses were summarized by CIBA-GEIGY in their 1/3/92 letter, but the results for individual samples were not provided. 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.

(6) Other data on atrazine in West Lake are discussed in EFGWB reviews 92-0152 and 92-0267.

8. RECOMMENDATIONS:

CIBA-GEIGY should provide the information cited as missing in item #5 of the conclusions section. However, it is generally unnecessary for CIBA-GEIGY to submit interim monitoring reports or data summaries (such as this) covering sampling periods of less than one year. The reason is that under new drinking water regulations, MCLs are compared to annual average concentrations in 4 samples collected quarterly. Therefore, short term averages exceeding the MCL and individual samples with concentrations exceeding the MCL need not be reported more frequently than annually unless they are so high, the annual concentration will either automatically exceed or have a high probability of exceeding the MCL. For example, a more frequent than annually reporting of individual concentrations exceeding 4 times the MCL might be justifiable, since such concentations would automatically cause an average annual concentration based upon 4 quarterly samples to exceed the MCL.

9. BACKGROUND:

The CIBA-GEIGY letter contains FIFRA 6(a)(2) data submissions on atrazine and cyanazine concentrations in samples collected August-September 1991 from West Lake which is the primary source of drinking water for Osceola, Iowa.

10. DISCUSSION:
See conclusions.

11. COMPLETION OF ONE-LINER
Not applicable

12. CBI INDEX:
Not applicable.

DP BARCODE: D173513

CASE: 282977 DATA PACKAGE RECORD DATE: 01/24/92
SUBMISSION: S410259 BEAN SHEET 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%
100101 Cyanazine 0.0000%

ID#: 282977
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: 173513 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# 421667-01) of atrazine and it metabolites in Lake Oceola, Iowa which is being submitted in followup to to an eariler submission dated November 6, (S56062).

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

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

EFGH.0468

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ATRAZINE 080803

Page_____ is not included in this copy.

Pages 6 through 8 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.

X 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.