

US EPA ARCHIVE DOCUMENT

DP Barcode : D176236, D171677
 PC Code No. : 080804
 EFGWB Out : APR 13 1993

TO: Kathryn Davis
 Product Manager # 52
 Reregistration Division (H7508W)

FROM: Elizabeth Behl, Head
 Ground Water Technology Section
 Environmental Fate & Ground Water Branch/EFED (H7507C)

THRU: Henry Jacoby, Chief
 Environmental Fate & Ground Water Branch/EFED (H7507C)

David A. Webb for EB
Henry Jacoby

Attached, please find the EFGWB review of...

Reg./File # : _____

Common Name : Prometon

Product Name : Pramitol

Company Name : Ciba Corporation

Purpose : Review request for mitigation measures for prometon in lieu of prospective ground-water study.

Type Product : Herbicide

Action Code : 610, 635 EFGWB #(s): 92-0260, 92-0715 Total Review Time = 1 days

EFGWB Guideline/MRID/Status Summary Table: The review in this package contains...

161-1	162-4	164-4	166-1
161-2	163-1	164-5	166-2
161-3	163-2	165-1	166-3
161-4	163-3	165-2	167-1
162-1	164-1	165-3	167-2
162-2	164-2	165-4	201-1
162-3	164-3	165-5	202-1

Y = Acceptable (Study satisfied the Guideline)/Concur P = Partial (Study partially satisfied the Guideline, but additional information is still needed)
 S = Supplemental (Study provided useful information, but Guideline was not satisfied) N = Unacceptable (Study was rejected)/Non-Concur

DP BARCODE: D171677

REREG CASE # 2545

CASE: 813912
SUBMISSION: S407507

DATA PACKAGE RECORD
BEAN SHEET

DATE: 04/08/90
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REREGISTRATION ACTION: 610 TIME EXTENTION REQUEST
CHEMICALS: 080804 Prometon (ANSI) 100.00

ID#: 080804-000100
COMPANY: 000100 CIBA-GEIGY CORP.
PRODUCT MANAGER: 52 KATHRYN DAVIS 703-308-8156 ROOM: CS1 3F3
PM TEAM REVIEWER: THOMAS JR LUMINELLO 703-308-8075 ROOM: CS1 4M1
RECEIVED DATE: 11/26/91 DUE OUT DATE: 02/04/92

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 171677 EXPEDITE: N DATE SENT: 11/26/91 DATE RET.: / /
CHEMICAL: 080804 Prometon (ANSI)
DP TYPE: 999 Miscellaneous Data Package
ADMIN DUE DATE: 01/15/92 CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	11/26/91	/ /
BRAN: EFGB	11/27/91	04/09/93
SECT: GTS	11/28/91	04/08/93
REVR : EWALDMAN	04/06/93	04/08/93
CONTR:	/ /	/ /

* * * DATA REVIEW INSTRUCTIONS * * *

For the attached reregistration List B case, please indicate whether you would approve of the request for a three month time extension for submission of the site-specific protocol for a small-scale prospective groundwater monitoring study? Will the extension mean that the due date for the final report be pushed back three months as well?

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

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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EFGBWB # 92-0260

DP BARCODE: D176236

REREG CASE # 2545

CASE: 813912
SUBMISSION: S414928

DATA PACKAGE RECORD
BEAN SHEET

DATE: 04/08/93
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REREGISTRATION ACTION: 635 PROPOSED TEST PROT SUBM
CHEMICALS: 080804 Prometon (ANSI) 100.00 %

ID#: 080804-000100
COMPANY: 000100 CIBA-GEIGY CORP.
PRODUCT MANAGER: 52 KATHRYN DAVIS 703-308-8156 ROOM: CS1 3F3
PM TEAM REVIEWER: THOMAS JR LUMINELLO 703-308-8075 ROOM: CS1 4M1
RECEIVED DATE: 03/12/92 DUE OUT DATE: 06/20/92

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 176236 EXPEDITE: N DATE SENT: 03/27/92 DATE RET.: / /
CHEMICAL: 080804 Prometon (ANSI)

DP TYPE: 999 Miscellaneous Data Package
ADMIN DUE DATE: 06/25/92 CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	04/02/92	/ /
BRAN: EFGB	04/03/92	04/09/93
SECT: GTS	04/04/92	04/08/93
REVR : EWALDMAN	04/06/93	04/08/93
CONTR:	/ /	/ /

* * * DATA REVIEW INSTRUCTIONS * * *

For the attached reregistration List B case, a required proposed protocol for a small scale prospective ground water monitoring study and discussion of site selection is forwarded for your review. However, the company proposes to discuss mitigation measures with the EFGWB personnel since Prometon is mobile and persistent and the company would prefer to forgo the study. See attached letter of March 10.

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

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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EFGWB # 92-0715

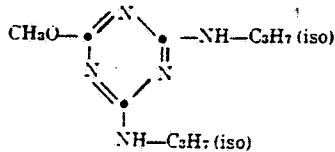
1. CHEMICAL:

Chemical name: 2,4-bis(isopropylamino)-6-methoxy-s-triazine

Common name: Prometon

Trade name(s): Pramitol, Gesafram 50, Ontracic 800

Structure:

2. TEST MATERIAL:

Not Applicable.

3. STUDY/ACTION TYPE:

Review request for mitigation measures for prometon to replace requirement for small-scale prospective ground-water monitoring study.

4. STUDY IDENTIFICATION:

Title(s): 1) Letter from Thomas Parshley (Ciba Regulatory Manager) to Tom Luminello (SRRD) and Submission of "A Small-Scale Prospective Ground-Water Monitoring Protocol for Prometon - Preliminary Site Selection Report"

2) Letter from Thomas Parshley (Ciba Regulatory Manager) to Tom Luminello (SRRD) concerning "Request for Time Extension for Site Specific Protocol for Ground Water Monitoring Study"

DP Barcode(s): D171677, D176236

Date Sent to EFED: 11/26/91, 04/02/92

Submitted for: Ciba Corporation
P.O. Box 18300
Greensboro, NC 27419-8300

5. REVIEWED BY:

Estella Waldman
Hydrologist

Signature: Estella Waldman

OPP/EFED/EFGWB/Ground Water Section

Date: 4/7/93

6. APPROVED BY:

Elizabeth Behl
Section Head
OPP/EFED/EFGWB/Ground Water Section

Signature: Elizabeth Behl

Date: 4/8/93

7. CONCLUSIONS:

A letter from Thomas Parshley (Ciba Regulatory Manager) to Tom Luminello (SRRD) was submitted to the Agency. In the letter, Mr. Parshley states that the persistent and mobile nature of prometon makes it likely that prometon would move to ground water in areas of "vulnerable aquifers and certain soil types". The registrant proposes potential mitigation measures; i.e, a ground-water label advisory, instead of conducting a study which would probably confirm that residues leach to ground water. EFGWB feels that the proposed mitigation measure is not adequate for a compound that exhibits the extreme persistence and mobility characteristics of prometon.

8. RECOMMENDATIONS:

SRRD should request that the registrant examine the potential measures available for the mitigation of pesticide residues in ground water, and propose an adequate plan for the protection of ground-water resources in prometon use areas. The Agency will review the proposals, and determine whether they are adequate for this purpose. If the mitigation measures are determined to be acceptable, the Agency will then decide what data are appropriate for this chemical.

9. BACKGROUND:

Prometon is a nonselective pre-emergence and postemergence industrial herbicide used for weed control on noncropland. Rates of application vary from 0.5 to 2 pounds per 100 ft², or 5 to 100 gallons per acre. The highest rates are used for the "hard to kill" weeds such as Johnson grass, bindweed, and wild carrot.

Prometon is an s-triazine compound which is extremely persistent and mobile in most soils (see attached one-liner), and resembles other compounds which leach to ground water. Prometon residues have been detected in ground water in six states including California, Connecticut, Nebraska, New Jersey, Texas, and Washington. Concentrations ranged from 0.05 - 29.6 ppb. The National Survey of Pesticides in Drinking Water Wells (NPS, 1990) found prometon in 1 out of 564 (0.2%) community water systems and in 4 out of 783 (0.5%) rural domestic drinking water wells. Prometon levels in this survey ranged from trace amounts to 0.57 ppb.

An MCL has not been established for prometon; the lifetime Health Advisory was tentatively established at 100 ppb, but is now being re-evaluated following the receipt of new toxicity data. Indications are that the MCL will be lowered following this review. Prometon is presently listed in Cancer Group D.

10. DISCUSSION:

In 1988, a review of environmental fate data for prometon (EAB #70730, #70747) indicated the need for a small-scale retrospective monitoring study. In November 1990, Ciba requested that the study type be changed to small-scale prospective because of the difficulty in finding suitable retrospective study sites. EFGWB accepted the study change to prospective (EFGWB #90958), and a protocol for the prospective study was submitted to the Agency and reviewed (EFGWB #91-0321). In November 1991, the registrant requested a time extension for the submission of a site-specific protocol for the prometon study (EFGWB #92-0260).

The registrant submitted a revised prospective protocol in March 1992 to correct the deficiencies noted in the original prospective protocol (EFGWB #92-0715). A letter from Thomas Parshley (Ciba Regulatory Manager) to Tom Luminello (SRRD) accompanied the protocol. In the letter, Mr. Parshley stated that "because of the persistent and mobile nature of this chemical, it is likely that a ground water study will confirm the potential of prometon to move to ground water in certain situations. These situations involve vulnerable aquifers and certain soil types". Mr. Parshley went on to say that the registrant was willing to "move directly to consideration of potential mitigation measures" instead of conducting a study. The registrant proposed a label advisory as an adequate mitigation measure for prometon.

EFGWB agrees that prometon would most likely leach to ground water if a prospective study were conducted, and is willing to consider appropriate mitigation measures for the compound in lieu of such a study. EFGWB also agrees that a label advisory is required for a compound with the environmental fate characteristics - and detections in ground water - of prometon. However, a label advisory, by itself, is not considered adequate mitigation for this compound. EFGWB recommends that SRRD:

- notify the registrant of our concerns,
- request that the registrant examine the measures available for mitigation of pesticide residues in ground water, and propose an adequate plan for the protection of ground-water resources in prometon use areas.

Environmental Fate & Effects Division
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY

PROMETON

Last Update on April 7, 1993

[V] = Validated Study [S] = Supplemental Study [U] = USDA Data

LOGOUT	Reviewer: <i>GW</i>	Section Head: <i>D. J. ...</i>	Date:
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Common Name: PROMETON

Smiles Code: n(c(nc1NC(C)C)OC)c(n1)NC(C)C

PC Code # : 80804

CAS #: 1610-18-0

Caswell #:

Chem. Name : 2,4-BIS(ISOPROPYLAMINO)-6-METHOXY-S-TRIAZINE

Action Type: Herbicide

Trade Names: PRAMITOL

(Formul'tn): EC; PELLETS

Physical State:

Use : WEED KILLER ON NON-CROPLAND
 Patterns :
 (% Usage) :
 :

Empirical Form: $C_{10}H_{19}N_5O$

Molecular Wgt.: 225.29

Vapor Pressure: $3.10E^{-6}$ Torr

Melting Point : °C

Boiling Point: °C

Log Kow : 4.3 @ 20C

pKa: @ °C

Henry's : $1.48E^{-9}$ Atm. M3/Mol (Measured)

$1.48E^{-9}$ (calc'd)

Solubility in ...

Comments

Water	6.20E	2	ppm	@20.0	°C	
Acetone	E		ppm	@	°C	
Acetonitrile	E		ppm	@	°C	
Benzene	E		ppm	@	°C	
Chloroform	E		ppm	@	°C	
Ethanol	E		ppm	@	°C	
Methanol	E		ppm	@	°C	
Toluene	E		ppm	@	°C	
Xylene	E		ppm	@	°C	
	E		ppm	@	°C	
	E		ppm	@	°C	

Hydrolysis (161-1)

[V] pH 5.0: STABLE

[V] pH 7.0: STABLE

[V] pH 9.0: STABLE

[] pH :

[] pH :

[] pH :

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Photolysis (161-2, -3, -4)

[V] Water:>>30 DAYS

[] :
[] :
[] :

[V] Soil :357 days ARTIFIC. LIGHT

[] Air :

Aerobic Soil Metabolism (162-1)

[V] >1 YR AT 25C SdLm,75% OF.33BAR

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Anaerobic Soil Metabolism (162-2)

[V] VIRTUALLY NO LOSS OF PRO-

[] METON AFTER 90 DAYS

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Anaerobic Aquatic Metabolism (162-3)

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Aerobic Aquatic Metabolism (162-4)

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Soil Partition Coefficient (Kd) (163-1)

[]	Sd	Si	Cl	%OM	pH	Kd
[S]	2	80	18	2.9	6.9	2.90
[S]	90	8	2	0.8	5.6	0.40
[S]	58	32	10	3.0	6.1	2.61
[S]	2	70	29	5.0	4.3	2.40
[S]	13	64	23	2.1	7.0	1.20

Soil Rf. Factors (163-1)

[S]	.73	PLAINFIELD SAND
[S]	.72	MISSISSIPPI SiLm
[S]	.44	DUBUQUE SiLm
[S]	.30	CALIFORNIA SdLm
[S]	.58	HAGERSTOWN SiClLm
[]		

Laboratory Volatility (163-2)

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[]

Field Volatility (163-3)

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[]

Terrestrial Field Dissipation (164-1)

[]
[S] T1/2 = 200-400 DAYS. PROMETON IS EXTREMELY PERSISTENT AND
[] CARRYOVER OF RESIDUES FROM ONE YEAR TO THE NEXT WOULD BE EX-
[] PECTED. DEPTH OF LEACHING AT LEAST 12" TO 18" IN NEBRASKA
[] SiLm AND NEW YORK SiLm.
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Aquatic Dissipation (164-2)

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Forestry Dissipation (164-3)

[]
[]

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PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY
PROMETON

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Long-Term Soil Dissipation (164-5)

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[]

Accumulation in Rotational Crops, Confined (165-1)

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[]

Accumulation in Rotational Crops, Field (165-2)

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[]

Accumulation in Irrigated Crops (165-3)

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[]

Bioaccumulation in Fish (165-4)

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[]

Bioaccumulation in Non-Target Organisms (165-5)

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Ground Water Monitoring, Prospective (166-1)

[] Protocol and preliminary site selection reports received from
[] registrant.
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Ground Water Monitoring, Small Scale Retrospective (166-2)

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Ground Water Monitoring, Large Scale Retrospective (166-3)

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Ground Water Monitoring, Miscellaneous Data (158.75)

[] Prometon residues have been detected in ground water in six
[] states (CA, CT, NE, NJ, TX, WA) at concentrations ranging from
[] 0.05 - 29.6 ppb.

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PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY

PROMETON

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Field Runoff (167-1)

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Surface Water Monitoring (167-2)

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Spray Drift, Droplet Spectrum (201-1)

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Spray Drift, Field Evaluation (202-1)

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Degradation Products

2-amino-4-(isopropylamino)-6-methoxy-s-triazine
2,4-diamino-6-methoxy-s-triazine
2-hydroxy-4,6-bis(isopropylamino)-s-triazine

Environmental Fate & Effects Division
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY
PROMETON

Last Update on April 7, 1993

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Comments

The slow rate of degradation of prometon and its leaching characteristics suggest that it might reach ground water. Soil Koc = 300 (geol. survey data), or 48 to 100. Photodegradation is slight. Prometon is extremely persistent in a Nebraska Silt Loam, and residue carryover from one year to the next would be expected.

Second Reported Koc = 200 on different soil

pKb = 9.73

References: EPA REVIEWS
Writer : PJH, EW