State of California

- Exhibit 11 -

# Memorandum

To : Jack C. Parnell
Director

Date : January 25, 1988

Place : Sacramento

Phone: 2-2395

From : Department of Food and Agriculture - Lyndon S. Hawkins, Chair
Subcommittee of the Pesticide Registration and Evaluation Committee

Subject : Prometon

Attached is the Findings and Recommendations regarding prometon. This report is pursuant to the requirements of the Pesticide Contamination and Prevention Act and is submitted on behalf of the Subcommittee of the Pesticide Registration and Evaluation Committee.

The State Water Resources Control Board does not concur with the attached finding. I have attached their minority finding.

Attachments

cc: Don Mengle
Syed Ali
Tobi Jones

SURNAME

SO-106

SUBCOMMITTEE OF THE
PESTICIDE REGISTRATION AND EVALUATION COMMITTEE

# IMPLEMENTATION OF THE PESTICIDE CONTAMINATION PREVENTION ACT PROMETON: FINDINGS AND RECOMMENDATIONS

January 25, 1988

Prometon has been found in ground water in Glenn County in 10 of 132 wells sampled at concentrations ranging from 0.1 to 5.9 ppb. A simulation model and the chemical properties of prometon indicate that it has a potential to leach to ground water. This information is on file at the California Department of Food and Agriculture.

Pursuant to California Notice 87-2, Notice of Prometon Finds in California Ground Water, and the Notice of Hearing Pertaining to Prometon (April 27, 1987), the subcommittee held hearings to review registrant reports, public comment, and other appropriate information regarding the presence of prometon in ground water and soil in California. After review of this information, the subcommittee offers the following findings and recommendations to the Director.

## FINDINGS

### Finding One

The subcommittee finds that a pollution level for prometon cannot be identified due to lack of complete health data as specified in the Birth Defect Prevention Act (SB 950). Because a pollution level has not been established, it is not possible to determine whether or not prometon has polluted the ground waters of the state. Further, a decision regarding the threat to pollute cannot be made because of the lack of a pollution level and the lack of data regarding environmental fate. Therefore, the subcommittee cannot make Finding One in the Food and Agricultural Code, Section 13150(c)(1) (Attachments 1, 2 and 3).

### Finding Two

Although a pollution level has not been established, the subcommittee finds that the agricultural use of prometon can be modified to protect against further residues from such use. Therefore, the subcommittee makes Finding Two in the Food and Agricultural Code, Section 13150(c)(2) (Attachments 4 and 5).

### Finding Three

The subcommittee finds that modifying use of prometon is unlikely to cause a severe economic hardship to the agricultural industry of the state because (1) the principal use of prometon identified in California was not agricultural use and (2) Ciba Geigy, the only registrant to present testimony at the prometon hearing, plans to register manufacture grade prometon only, and to discontinue

agricultural use in California in 1988. The subcommittee further cannot recommend a level of prometon that does not significantly diminish the margin of safety not to cause adverse health effects because the SB 950 health data are not complete. Therefore, the subcommittee cannot make Finding Three in the Food and Agricultural Code, Section 13150(c)(3).

Chronic Toxicity Determination

The toxicological data for prometon are not sufficient to establish its carcinogenicity, mutagenicity, teratogenicity, or neurotoxicity.

## RECOMMENDATIONS

a. Ban all agricultural uses of prometon except where it can be shown that such use does not threaten ground water.

b. Evaluate non-agricultural uses of prometon for the potential to contaminate ground water. This evaluation should include field monitoring.

## ACKNOWLEDGMENTS

The subcommittee thanks those who provided information about prometon, including facts about its toxicology, use, and potential relationships to ground water pollution. We also thank the staffs of the County Agricultural Commissioners and the cooperative U.C. Extension Service who took the time to discuss with us the agricultural practices in areas where prometon has been found in ground water.

Lyndon S. Hawkins
Chair of Subcommittee
Pest Management Specialist IV
California Department of Food and Agriculture

(minority finding attached)
Syed M. Ali, Ph.D.
Environmental Specialist
State Water Resources Control Board

Donald C. Mengle
Research Scientist
Department of Health Services

State of California

# Memorandum

To : Lyndon S. Hawkins, Chair
Subcommittee of the Pesticide Registration
and Evaluation Committee

Date : January 25, 1988

Syed Ali

Syed M. Ali, Ph.D., Member
Subcommittee of the Pesticide Registration
and Evaluation Committee

From : **STATE WATER RESOURCES CONTROL BOARD**

Subject: FINDINGS FOR PROMETON BY THE WATER RESOURCES CONTROL BOARD

Attached is the Water Resources Control Board's determination of no findings for prometon. If you have any questions, please call me at 3-7609.

Attachment

SUBCOMMITTEE OF THE

PESTICIDE REGISTRATION AND EVALUATION COMMITTEE

IMPLEMENTATION OF THE PESTICIDE CONTAMINATION PREVENTION ACT

PROMETON

WATER RESOURCES CONTROL BOARD FINDINGS

JANUARY 25, 1988

Prometon has been found in ground water in Glenn County in 10 of 132 wells sampled at concentrations ranging from 0.1 to 5.9 ppb. The chemical properties of prometon indicate that it can leach to ground water. This information is on file at the Department of Food and Agriculture.

Pursuant to California Notice 87-2, Notice of Prometon Finds in California Ground Water, and the Notice of Hearing Pertaining to Prometon (April 27, 1987), the subcommittee held hearings to review registrant reports, public comment, and other appropriate information regarding the presence of prometon in California ground water.

After review of this information (see attached Comments for Prometon), the Water Resources Control Board has determined that a finding, as specified in Section 13150 (c) (1,2 and 3) of the Food and Agricultural Code, cannot be made for the following reasons:

- Prometon was not demonstrated to be safe, due to a lack of health studies;

- No modified uses of prometon that would prevent its movement to ground water were presented; and,

- Alternatives for prometon exist that preclude severe economic hardship to the state's agricultural industry.

Syed Ali

Syed M. Ali, Ph.D.
Environmental Specialist
Water Resources Control Board

STATE WATER RESOURCES CONTROL BOARD

COMMENTS FOR PROMETON

PUBLIC HEARING
JANUARY 25, 1988

I. Formulations of Products Containing Prometon

- There are 20 products containing prometon as an active ingredient registered for use in California. The CIBA-GEIGY Corporation markets prometon as Pramitol 25E and Pramitol 5PS, which contains 0.75% simazine.

- Pramitol 25E contains 25% active ingredients and 75% inert ingredients; Pramitol 5PS contains 95% active ingredients and 5% inert ingredients.

- It is not known how many of the inert ingredients found in these formulations pose a threat to ground water, because they are often denoted by trade names rather than chemical names. At least one ingredient has been identified by the Environmental Protection Agency as potentially toxic (Federal Register, Vol. 52. No. 7).

- No information about other formulations containing prometon have been submitted.

II. Environmental Fate Parameters Submitted by CIBA-GEIGY

- Studies on 11 chemical parameters of prometon have been requested by the Department of Food and Agriculture. Four of these studies (for vapor pressure, Henry's Law constant, aerobic soil metabolism, and anaerobic soil metabolism) have not been found by Department chemists to be acceptable. One study, for partition coefficient of prometon degradates, has not yet been submitted.

- Environmental fate information was not submitted for any degradation products of prometon.

III. Results of Evaluating Mobility of Prometon in Soil

- Prometon ranked in the top 17 of 82 chemicals evaluated for mobility in an "average" soil (Helling, Charles .S., Phillip C. Kearney, and Martin Alexander. 1971. Behavior of Pesticides in Soil. Advances in Agronomy, 23: 147-240).

- Evaluation of prometon using a screening model recently developed at U.C. Riverside indicates that prometon poses a risk to ground water (Jury, William A., Dennis D. Focht, and Walter J. Farmer. In press. Estimation of Pesticide Groundwater Pollution Potential Using Chemical Benchmark Properties).

- Prometon has been placed on the Environmental Protection Agency's list of pesticides to be evaluated under the Ground Water Data Call-in; this list contains chemicals that are considered to be a threat to ground water (Federal Insecticide, Fungicide and Rodenticide Act, as amended, 1978. U.S. Environmental Protection Agency).

IV. Summary of Data Presented for Prometon (see Attachments)

- Prometon has been detected in California ground water in Glenn County at levels which significantly exceed minimum levels of detection.

- All four of the chemical and environmental fate properties of prometon exceed the threshold specific numerical values established by the Department of Food and Agriculture.

- Maximum concentrations of prometon predicted due to leaching by the Pesticide Root Zone Model were considerably higher than actual concentrations detected in ground water.

- Plausible paths other than leaching to account for the presence of prometon in ground water have been proposed, but are not as yet well substantiated.

V. Summary of Data Not Available for Prometon

- No environmental fate studies were submitted for degradation products, by-products, or inert ingredients; these products were not identified.

- No environmental fate or health studies for any formulated product containing prometon as an active ingredient were submitted.

- Four of eleven studies submitted by the registrant to identify the chemical characteristics of prometon have been determined unacceptable by the Department of Food and Agriculture; one study has not yet been submitted.

- Eight of ten health studies for this active ingredient (required by the Birth Defects Prevention Act, SB 950) were not submitted.

- No modifications of use were identified for any product containing prometon as an active ingredient.

ATTACHMENT 1

# FINDINGS OF PROMETON IN GROUND WATER IN CALIFORNIA

| County | No. of Findings (a) | Conc. Range (ppb) | Source |
|---|---|---|---|
| Glenn | 10 (132) | 0.1 - 5.9 | DFA (1) |

(a) Numbers in parentheses indicate number of wells sampled.

(1) Segawa, R.T., R. Maykoski, and R.J. Sava. Survey for Triazine Herbicides in Well Water, Glenn County, 1986. December, 1986. California Department of Food and Agriculture.

ATTACHMENT 2

## COMPARISON OF CHEMICAL PROPERTIES OF PROMETON AND DFA SPECIFIC NUMERICAL VALUES

| Chemical Property | Values Reported by CIBA-GEIGY | Specific Numerical Values Set by DFA (1) |
|---|---|---|
| Water Solubility @ 20 C (ppm) | 720 | > 7 |
| $K_{oc}$ (ml/g) | 90-170 | < 512 |
| Hydrolysis half-life (days) | > 309 | > 13 |
| Field Dissipation half-life (days) | 309-938 | > 11 |

(1) From Wilkerson, M.R. and K.D. Kim. The Pesticide Contamination Prevention Act: Setting Specific Numerical Values. December, 1986. California Department of Food and Agriculture.

# RESULTS OF MODELING PROMETON TRANSPORT USING THE PESTICIDE ROOT ZONE MODEL (PRZM)

Conditions of modeling assumed:

- An application rate of 33.6 lb/acre
- 20+ years of prometon loading
- Three application rates: annual, biennial, and triennial
- Bottom of root zone at 5-foot soil depth

Conclusions for triennial applications:

| County | Soil Modeled | Modeled Conc. (ppb) Mean | Modeled Conc. (ppb) Max. | Max. Detected Conc. (ppb) |
|---|---|---|---|---|
| Glenn | Willows clay | 39 | 104 | 5.9 |

Other Conclusions:

- Prometon concentrations stabilized at 5-foot soil depth after 5 years of modeling, and did not increase significantly after an additional 20 years of modeling.
- Highest concentration of prometon at 5-foot depth was 282 ppb for annual applications.
- Sensitivity analyses were not performed, so model input variables that significantly affect model output were not determined.

# ADDITIONAL MEANS OF ENTRY OF PROMETON INTO GROUND WATER

Additional paths have been proposed to account for the presence of prometon in ground water in Glenn County:

- Fissures in clay soils
- Poorly constructed wells

CIBA-GEIGY claims that prometon has entered ground water through soil fissures or through poorly constructed wells, which act as direct connections between the soil surface and ground water. No data were presented to discount the leaching of prometon to ground water due to agricultural use.