



Department of Pesticide Regulation



Mary-Ann Warmerdam
Director

MEMORANDUM

Arnold Schwarzenegger
Governor

TO: Paul H. Gosselin
Chief Deputy Director

FROM: Mary-Ann Warmerdam
Director
(916) 445-4000

DATE: May 24, 2007

SUBJECT: DIRECTOR'S PROPOSED DECISION CONCERNING METHIDATHION AS A TOXIC AIR CONTAMINANT

Attached is a public notice of the proposed decision to declare methidathion as a toxic air contaminant. This proposed decision was based on the Scientific Review Panel's finding of methidathion as a toxic air contaminant. My response has been made in accordance with all authorities and requirements stipulated in the Food and Agricultural Code and California Code of Regulations¹ that mandate this determination.

Thanks to you, our staff, and all the members of the Scientific Review Panel for the excellent work.

Attachment

cc: Robert Saywer, Chair (w/Attachment)
Air Resources Board

Joan E. Denton, Ph.D., Director (w/Attachment)
Office of Environmental Health Hazard Assessment

Jim Behrmann, Air Resources Board Liaison to the Scientific Review Panel (w/Attachment)

Scientific Review Panel (w/Attachment)

¹ The Scientific Review Panel's findings were transmitted on May 10, 2007. The Food and Agricultural Code and California Code of Regulations mandate that DPR's Director must respond within ten working days.





Mary-Ann Warmerdam
Director

Arnold Schwarzenegger
Governor

May 24, 2007

Post Until
July 4, 2007

NOTICE OF PROPOSED DECISION CONCERNING THE DIRECTOR'S DECLARATION OF METHIDATHION AS A TOXIC AIR CONTAMINANT

Section 14023 of the Food and Agricultural Code requires the Director of the Department of Pesticide Regulation (DPR) to determine if a pesticide is a toxic air contaminant (TAC) after receiving the findings of the Scientific Review Panel (SRP), a panel of experts representing a range of scientific disciplines. Based on the findings of the SRP's assessment of the report entitled "Final Draft Methidathion Risk Characterization Document" and the criteria given in Title 3, California Code of Regulations (3 CCR) section 6890(b), DPR's Director proposes to declare methidathion as a TAC.

Background

With the enactment of California's TAC Act (Assembly Bill 1807, Tanner, Chapter 1047, Statutes of 1983; amended by Tanner, Chapter 1380, Statutes of 1984), the Legislature created the statutory framework for the evaluation and control of chemicals as TACs. The statute defines TACs as air pollutants that may cause or contribute to increases in serious illness or death, or that may pose a present or potential hazard to human health. DPR is responsible for the evaluation of pesticides as TACs.

In general, the law focuses on the evaluation and control of pesticides in ambient community air. In implementing the law, DPR must: (1) conduct a review of the physical properties, environmental fate, and human health effects of the candidate pesticide; (2) determine the levels of human exposure in the environment; and (3) estimate the potential human health risk from those exposures. The law requires DPR to list in regulation those pesticides that meet the criteria to be TACs.

For each pesticide, the law requires the preparation of a report that includes: the environmental fate and use of the pesticide, an assessment of exposure of the public to air concentrations of the pesticide, and a health assessment. The report is reviewed by the Office of Environmental Health Hazard Assessment and the Air Resources Board, and is made available for public review. Based on the results of these reviews, the draft report is revised as appropriate. The draft undergoes a rigorous peer review for scientific soundness by the SRP. Based on the results of this comprehensive evaluation, DPR's Director determines whether the candidate is a TAC. If DPR's Director determines the pesticide meets the criteria to be a TAC, DPR declares the pesticide a TAC in regulation, and adds it to the TAC list.



Once a candidate pesticide has been declared a TAC, it enters phase two of the program—the mitigation, or control, phase. In the mitigation phase, DPR investigates the need for, and appropriate degree of, control for the TAC. If reductions in exposure are needed, DPR must develop control measures to reduce emissions to levels that adequately protect public health.

Conclusions

Title 3 CCR section 6890 states, “A pesticide shall be identified as a toxic air contaminant if its concentrations in ambient air are greater than the following levels (for the purposes of this section, a threshold is defined as the dose of a chemical below which no adverse effect occurs):

- (a) For pesticides which have thresholds for adverse health effects, this level shall be ten-fold below the air concentration which has been determined by DPR’s Director to be adequately protective of human health.
- (b) For pesticides which do not have thresholds for adverse health effects, this level shall be equivalent to the air concentration which would result in a ten-fold lower risk than that which has been determined by DPR’s Director to be a negligible risk.”

Human exposures were estimated using a methyl parathion application site study in San Joaquin County as a surrogate due to an unanticipated change in wind direction in the methidathion application site study. Ambient air exposure was estimated using monitoring data for methidathion in several rural communities in Tulare County. The infant bystander acute exposures at the application site represented 250 and 440 percent of the acute reference concentration for 1 hour and 24 hours (time-weighted average), respectively. As described above, air concentrations exceeding one-tenth (10 percent) of the reference concentrations meet the criteria for listing as a TAC. The infant seasonal and chronic exposures were also greater than 10 percent of the reference concentration at 51 percent and 11 percent, respectively. The adult bystander exposure at the application site also exceeded 10 percent of the reference concentration for 1 hour (46 percent), 24 hours (210 percent), and seasonal exposure (25 percent). Neither the seasonal nor chronic ambient air exposures exceeded 10 percent of the reference concentration. The air concentrations of methidathion also exceeded 10 percent of the reference concentration for carcinogenicity for both the application site and ambient air.

The SRP agrees with the science presented in the risk characterization document and recommends that the Director identify methidathion as a TAC.

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Actions

DPR proposes to adopt a regulation designating methidathion as a TAC. DPR proposes to add methidathion to the list of pesticides in 3 CCR section 6860(a).

DPR will conduct a public hearing concerning the proposed regulation.

APPROVED BY: 
Mary-Ann Warmerdam, Director

Date: May 24, 2007