

Office of Environmental Health Hazard Assessment



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MEMORANDUM

TO: Charles M. Andrews, Chief
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FROM: Robert Schlag, M.Sc., Chief
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DATE: July 19, 2006

SUBJECT: COMMENTS ON THE DEPARTMENT OF PESTICIDE REGULATION'S
(DPR) MITIGATION PROPOSAL FOR THE CONTROL OF OFF-SITE AND
BYSTANDER EXPOSURE TO METHYLSITHIOCYANATE (MITC)

Thank you for the continuing opportunity to participate in the MITC Interagency Work Group meetings to discuss public health issues related to development of the methyl isothiocyanate (MITC) mitigation strategies. We look forward to continuing the interagency dialog on this important and difficult issue. We note that at the May 24 work group meeting you requested our review of the pre-decisional draft Mitigation Proposal for MITC, dated May 23. Subsequently, you provided updated buffer zone tables and requested our review of these tables as well.

We note that the listing of MITC as a Toxic Air Contaminant (TAC) on August 23, 2002, compels the development of these use restrictions. Pursuant to Food and Agricultural Code,

California Environmental Protection Agency

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Charles M. Andrews, Chief
July 19, 2006
Page 2

section 14023(e), the Office of Environmental Health Hazard Assessment (OEHHA) provides consultation to DPR regarding the need for and appropriate degree of control measures for pesticides listed as TACs. Further, under Food and Agricultural Code, section 13129, OEHHA has the authority to provide advice, consultation, and recommendations to DPR concerning the risks to human health associated with exposure to pesticide active ingredients. It is under these provisions that we offer our comments on this important matter.

OEHHA offers the following comments on the proposal:

Appropriate Target Values for Acute Exposure

Proposed buffer zone values are largely based on a target value of 220 ppb for MITC exposure (see Comparison of Buffer Zone Values, dated June 6, 2006). This is consistent with DPR's stated intention to adopt the human NOAEL of 220 ppb as the acute target value for such exposures. As presented in detail in our original comments on DPR's Mitigation Strategy (provided in our memorandum dated May 5, 2006), OEHHA reiterates its disagreement with the adoption of 220 ppb as the acute target value for exposure to this chemical.

Use of the NOAEL as the target value does not consider human variability; therefore, an unknown proportion of the population may be at risk at this level of exposure. Further, since this study had such a small sample size (four subjects), confidence in the NOAEL is relatively low. Use of this NOAEL is in essence, mitigation to a margin of exposure (MOE) of 1, which is not an acceptable level for public health protection. A MOE of at least 10 is generally accepted as health protective when based on a NOAEL from a human study.

Accordingly, we recommend the adoption of a target value of 22 ppb, which is the reference exposure level (REL) for MITC, and would yield a MOE of 10, a margin that would more effectively protect public health. Additional detail regarding this concern is provided in the aforementioned memorandum.

Fieldworker Activity Evaluation and Restrictions

We note and agree with the notification requirement regarding neighboring property operators who are producing an agricultural commodity. We recommend that in addition to this notification that neighboring property operators be also required to inform their own employees regarding nearby metam sodium/potassium applications.

Aside from the target value issue, OEHHA finds the mitigation proposal to be coherent, thorough, and, if adopted, will modify critical application and use practices regarding metam sodium/potassium that should serve to greatly reduce MITC exposures over current practice. We

Charles M. Andrews, Chief
July 19, 2006
Page 3

appreciate the opportunity to collaborate with DPR and other agency representatives in protecting the public from potentially hazardous exposure to pesticides. Should you have any questions regarding our comments, please contact either of us.

cc: Val F. Siebal
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Charles M. Andrews, Chief
July 19, 2006
Page 4

Reference:

Wheeler S, Rosenstock L, Barnhart S (1999). A case series of 71 patients referred to a hospital-based occupational and environmental medicine clinic for asthma. *West J Med*; 168:98-104.

Department of Health Services, Environmental Health Investigations Branch. California Breathing Program. October 2005. (http://www.californiabreathing.org/asthma_data/)