



Department of Pesticide Regulation



Brian R. Leahy
Director

MEMORANDUM

Edmund G. Brown Jr.
Governor

TO: Dr. Marylou Verder-Carlos
Assistant Director
Pesticide Programs Division

HSM-16007
(No. assigned after issuance of memo)

FROM: Lisa Ross, Ph.D.
Environmental Program Manager II
Chief, Worker Health and Safety Branch
(916) 324-4116

[Original signed by L. Ross]

DATE: January 15, 2016

SUBJECT: COMPLETION OF ETHYL PARATHION MITIGATION (1988) AND (1992)

Ethyl parathion is an organophosphate insecticide-acaricide first evaluated as a toxic air contaminant in 1988 (Evaluation of Ethyl Parathion as a Toxic Air Contaminant, Oudiz and Klein, 1988). Department of Pesticide Regulation staff updated the toxicological database and risk assessment to form the basis for recommending the listing of ethyl parathion as a Toxic Air Contaminant (TAC) in 1992.

The 1988 risk assessment, based on the inhibition of cholinesterase (ChE) in humans, found acceptable MOSs for ambient air exposures. The 1992 assessment presented alternatives for using endpoints other than the inhibition of ChE. Toxicity endpoints reviewed in the assessment included lacrimation and nasal discharge, ocular function deficit, tremors, and body weight reduction observed in animals.

A Margin of Safety (MOS) of 100 is generally considered adequate for the protection of human health when the toxicological endpoints are derived from animal studies. Acute exposures were identified with MOSs of less than 100. Subchronic and chronic exposures resulted in MOSs of greater than 100. Applying the extra 10-fold factor as specified in the *Criteria for Identifying Pesticides as Toxic Air Contaminants* (Section 6890, Title 3, California Code of Regulation), an MOS below 1,000 will trigger listing a pesticide as a TAC. Ethyl parathion was recommended for listing as a TAC.

Effective December 13, 2006, the U.S Environmental Protection Agency cancelled the last ethyl parathion products registered for use in the United States. No mitigation of risks is necessary at this time because no products containing ethyl parathion are currently registered in California. However, if products containing ethyl parathion are registered in California in the future, a risk assessment should be considered. Your approval of this conclusion is requested.

cc: Kevin Solari, Environmental Program Manager I (Supervisory)



Dr. Marylou Verder-Carlos
January 15, 2016
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APPROVAL

[Original signed by M. Verder-Carlos]
Marylou Verder-Carlos, Assistant Director

January 25, 2016
Date