UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

Date: May 26, 1999

SUBJECT: **CHLORETHOXYFOS** - Review Of A Repeated Exposure Inhalation Study And Evaluation Of That Study By The Hazard Identification Assessment Review Committee.

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Summary: In July of 1998, during the reevaluation of eight organophosphate compounds, the Hazard Identification Assessment Review Committee (HIARC) selected a dose of 0.06 mg/kg/day as the dose to be used in Short and Intermediate-term inhalation risk assessments. This dose was based on the NOAEL seen in a 6-month oral-dosing ocular toxicity study in the dog. The selection of an inhalation risk assessment endpoint based on an oral study was necessary in July of 1998 when no appropriate inhalation studies were available.

Since then, the Registrant has submitted a seven day repeated exposure inhalation study in the rat (MRID 44382101). This study was reviewed and evaluated by the HIARC on May 20, 1999. The HIARC determined that this study should be used for Short-Term inhalation risk assessment. Consequently the NOAEL of 0.000508 mg/L/day will be used for Short-Term inhalation exposure risk assessments. The HIARC determined that this study is appropriate only for Short-Term risk assessment since the duration of the study was only for 7 days and not appropriate for use in Intermediate-Term risk assessment which is of a long exposure duration (i.e, 7-days to several months). Therefore, for Intermediate -term risk assessment remains unchanged (i.e, the oral value of 0.06 mg/kg/day from the 6-month dog study will be used for this risk assessment. A long-term (several months to lifetime) endpoint has never been considered for this chemical because it is not anticipated that there would be any long-term dermal exposure. This HIARC also did not select a long-term endpoint based on the same rationale. **The doses and endpoints are presented in the following Table.**

The toxicology endpoints selected for dietary and non-dietary risk assessments are presented below:

Exposure Scenario	Dose	Endpoint	Study
Acute Dietary	NOAEL=0.06 mg/kg/day	Plasma ChE inhibition seen on day 3)	6-month ocular toxicity study in dogs
	UF=100	**Acute RfD = 0.0006 mg/kg**	
Chronic Dietary	NOAEL=0.06 mg/kg/day	Plasma, RBC and/or brain ChEI following subchronic and chronic exposures	The combined results of the 90-day, 6-month and 1-year studies in dogs.
	UF=100		
	Chronic RfD = 0.0006 mg/kg		
Short-Term Dermal (1-7 Days)	Dermal NOAEL 1.25 mg/kg/day	Erythrocyte ChEI	21-Day Dermal - Rat
Intermediate-Term Dermal (7days to several months)	Dermal NOAEL 1.25 mg/kg/day	Erythrocyte ChEI	21-Day Dermal - Rat
Long-Term Dermal (several months to life-time)	Based on the current use pattern (1 application/year), there is no potential long-term dermal exposure. Therefore, this risk assessment is not required at this time.		
Short-Term Inhalation (1-7 Days)	Inhalation NOAEL= 0.000508 mg/L	Plasma, RBC, and brain ChEI.	7-Day Inhalation-Rat
Intermediate-Term Inhalation (7days to several months)	Oral NOAEL=0.06 mg/kg/day [a]	Plasma ChE inhibition seen on day 3)	6-month ocular toxicity study in dogs
Long-Term (several months to life-time)	Based on the current use pattern (1 application/year), there is no potential long-term inhalation exposure. Therefore, this risk assessment is not required at this time.		

a= Since an oral value was selected 100% inhalation absorption factor should be use in route-to-route extrapolation.