

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

September 1, 1999

To: p,p'-DDE file (CAS # 72-55-9)  
From: Gary Butterfield  
Subject: Screening level for p,p'-DDE

The screening level for p,p'-DDE is based on the EPA IRIS value of the oral slope factor of  $3.4E-1$  per (mg/kg) which EPA derived by taking the geometric mean of three slope factors. The three key studies for DDE were identified by EPA as being: NCI 1978, Tomatis et al 1974, and Rossi et al 1983. This slope factor is consistent with slope factors for DDT, DDD, as well as, structurally similar dicofol.

The oral slope factor was converted by this reviewer to an inhalation slope factor of  $1E-4$  per ( $\mu\text{g}/\text{m}^3$ ). The resulting IRSL of  $0.01 \mu\text{g}/\text{m}^3$  and SRSL of  $0.1 \mu\text{g}/\text{m}^3$  was obtained.

The combined impact of DDT, DDE and DDD should be considered if all are present. DDE and DDD are metabolites of DDT. All three compounds cause the same type of tumors (hepatocellular carcinomas, and hepatomas) in the same organ, liver. Therefore, the combined amounts of these three chemicals should be below the screening level of IRSL =  $0.01 \mu\text{g}/\text{m}^3$  and SRSL =  $0.1 \mu\text{g}/\text{m}^3$ .

GB:ST