

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for p,p'-dichlorodiphenyltrichloroethane (DDT); CAS # 50-29-3
FROM: Robert Sills, AQD Toxics Unit Supervisor
SUBJECT: IRSL justification for DDT
DATE: July 15, 2015

On June 24, 1987, the DEQ Air Quality Division (AQD) established an IRSL= 0.01 ug/m³ and SRSL= 0.1 ug/m³ (both with annual averaging time) for DDT. This was based on a carcinogenicity assessment and a unit risk estimate in the EPA (1991) IRIS database, which was last revised on May 1, 1991. That IRIS assessment is still current as of the date of this report.

The EPA (1991) derived a DDT inhalation unit risk estimate of 9.7E-5 per ug/m³, which was calculated by EPA (1991) from the oral bioassay data also presented and an oral slope factor = 3.4E-1 per (mg/kg-d).

The IRSL and SRSL were derived as follows:

$$\text{IRSL (ug/m}^3\text{)} = \frac{1\text{E-6}}{9.7\text{E-5 (ug/m}^3\text{)}^{-1}} = 0.01 \text{ ug/m}^3$$

$$\text{IRSL (ug/m}^3\text{)} = \frac{1\text{E-5}}{9.7\text{E-5 (ug/m}^3\text{)}^{-1}} = 0.1 \text{ ug/m}^3$$

Reference

EPA. Integrated Risk Information System. Chemical file for DDT. Carcinogenicity assessment last revised May 1, 1991. Retrieved July 15, 2015.

RS:lh