MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

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INTEROFFICE COMMUNICATION

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November 6, 2003

TO: File for 2-Ethyl-1,4-Dimethyl Benzene (CAS No. 1758-88-9)

FROM: Michael Depa, Toxics Unit, Air Quality Division

SUBJECT: Screening Level Determination

The initial threshold screening level (ITSL) for 2-ethyl-1,4-dimethyl benzene is 0.1 µg/m³ (annual averaging time).

The following references or databases were searched to identify data to determine the screening level: Environmental Protection Agency's (EPA's) Integrated Risk Information System (IRIS), the Registry of Toxic Effects of Chemical Substances (RTECS), the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV), National Institute of Occupational Safety and Health (NIOSH) Pocket Guide to Hazardous Chemicals, Environmental Protection Bureau Library, International Agency for Research on Cancer (IARC) Monographs, Chemical Abstract Service (CAS) Online (1967- October 2003), National Library of Medicine (NLM), Health Effects Assessment Summary Tables (HEAST), and National Toxicology Program (NTP) Status Report. The EPA has not established a reference concentration (RfC) or reference dose (RfD) for 2-ethyl-1,4-dimethyl benzene. There are no occupational exposure limits for 2-ethyl-1,4-dimethyl benzene. The molecular weight is 134.2 g, and the molecular formula is $C_{10}H_{14}$. The Molecular structure is pictured in Figure 1. The melting point is -53.7 ℃. Water solubility is 14.6 mg/L @ 25 ℃. Th e Vapor Pressure is 0.939 mm Hg at 25 ℃. 2-ethyl-1,4-dimethyl benzene is expected to be a liquid at standard temperature and pressure.

Figure 1. Molecular Structure of 2-Ethyl-1,4-Dimethyl Benzene
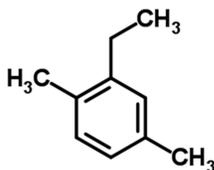
Since there was no adequate toxicological data with which to derive a screening level, Rule 232(1)(i) was used to establish the screening level of 0.1 µg/m³ with an annual averaging time.

MD:LH