MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

December 17, 1996

TO: File for XUS11136.01L (CAS# 27274-31-3)

FROM: Michael Depa, Toxics Unit, Air Quality Division

SUBJECT: Screening Level Determination

The initial threshold screening level (ITSL) for XUS11136.01L is 6 μg/m³ based on an annual averaging time.

The following references or databases were searched to identify data to determine the ITSL: IRIS, RTECS, ACGIH Threshold Limit Values, NIOSH Pocket Guide to Hazardous Chemicals, Environmental Protection Bureau Library, IARC Monographs, CAS Online (1967 - October 1, 1996), National Library of Medicine, Health Effects Assessment Summary Tables, and NTP Status Report. Review of these sources found that EPA has not established an RfD or RfC for XUS11136.01L.. The ACGIH or NIOSH have not established occupational exposure limits (OELs). Dave Haslam of Dow Chemical faxed the AQD an acute oral toxicological study. On December 16, 1996, Mr. Haslam verified via phone conversation that the chemical XUS11136.01L is the same chemical that is used in the toxicity study summarized below.

Groups of 3 rats (strain unspecified) were administered by gavage a single dose of 500, 1000 or 2000 mg/kg polyethylene monoallyl ether (FAX from Dow). No mention of control animals was reported. It was reported that lethargy occurred in the 1000 and 2000 mg/kg dose groups. All rats recovered and appeared healthy and gained weight normally during the two-week observation period. No lesions were reported upon pathological examination. Personal communication with Dave Haslam of Dow Chemical (Midland) established that this chemical is 98.7% XUS11136.01L. Since there were no deaths observed in the rats dosed with 2000 mg/kg this dose was determined to be a surrogate LD50. This dose was used to develop the ITSL according to Rule 232(1)(h).

$$ITSL = 1/500 \times 1/100 \times 1/40 \times LD50/0.167 \times W_a/I_a$$

Where W_a and I_a are the default weight and inhalation rate of the rat (EPA, 1988).

$$ITSL = 1/(2,000,000) \times (2000 \text{ mg/kg})/(0.167) \times (0.395 \text{ kg})/(0.373 \text{ m}^3)$$

$$ITSL = 6.34 \times 10^{-3} \text{ mg/m}^3$$

ITSL = 6 μg/m³ (based on an annual averaging time)

The ITSL for XUS11136.01L is 6 μg/m³ based on an annual averaging time.

REFERENCES

EPA. 1988. Recommendations for and documentation of biological values for use in risk assessment. PB 88-179874.

MD:slb