MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

October 21, 1994

TO: File for Thiazole Ester (64485-82-1)

FROM: Marco Bianchi

SUBJECT: Initial Threshold Screening Level

The initial threshold screening level (ITSL) for thiazole ester is 17 $\mu g/m^3$ based on an annual averaging time.

The following references or databases were searched to identify data to determine the ITSL: IRIS, HEAST, NTP Management Status Report, RTECS, EPB-CCD, EPB library, CAS-online, NLM-online, IARC, NIOSH Pocket Guide, and ACGIH Guide.

A complete reference check was conducted for thiazole ester, but only limited information was available. Upjohn provided an in-house oral LD_{50} study for thiazole ester. A single group of four male albino rats were orally dosed at 5000 mg/kg of thiazaole ester suspended in a 0.25% methylcellulose aqueous solution. One of the four rats salivated and had dried red material around the mouth for three hours after dosing. By four hours post dosing, three of the four rats appeared normal, and thereafter for the remainder of the 14-day study period. The fourth rat had yellow staining on the fur around the anogenital area from days two through four post dosing. By day five this rat appeared normal and remained so until the end of the study. All rats had body weights which exceeded their fasting weights by study termination. Necropsy of all four rats at terminal euthanasia did not reveal any gross lesions. Although there were no deaths from compound administration at 5000 mg/kg, this value will be used as a surrogate to calculate an ITSL.

The ITSL was derived as follows:

The LD_{50} for this study was determined to be 5000 mg/kg.

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LD_{50} = 5000 mg/kg

$$ITSL = \frac{1}{500} \times \frac{1}{40} \times \frac{1}{100} \times \frac{5000}{0.167 \times 0.900} = 0.0166 \text{ mg/kg}$$

0.0166 mg/kg x 1000 = 17 $\mu g/m^3$ based on annual averaging.

The ITSL for thiazole ester = 17 $\mu g/m^3$ based on annual averaging.

MB:ma