MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

October 21, 1994

TO: File for 4-Aza Acid (103335-54-2)

FROM: Marco Bianchi

SUBJECT: Initial Threshold Screening Level

The initial threshold screening level (ITSL) for 4-aza acid 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 4-aza acid, but only limited information was available. Upjohn provided an in-house oral LD50 study for 4-aza acid. A single group of four male albino rats were orally dosed at 5000 mg/kg of 4-aza acid suspended in a 0.25% methylcellulose aqueous solution. Three of the four rats appeared normal for six hours post dosing. The remaining rat had respiratory rales between two and four hours post dosing, but appeared normal by six hours post dosing. Two of the three unaffected rats and the rat having rales appeared normal on day one post dosing and gained body weight throughout the 14-day study period. The remaining rat had rales on day one post dosing, but appeared normal thereafter. This rat also had body weight gain throughout the 14-day study period. Necropsy of all four rats at 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:

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 = 16.6 $\mu g/m^3$ based on annual averaging.

The ITSL for 4-aza acid = 17 $\mu g/m^3$ based on annual averaging.

MB:ma