

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

APRIL 27, 1994

TO: File for N-Butyl Bromide (109-65-9)  
FROM: Marco Bianchi  
SUBJECT: Initial Threshold Screening Level

The initial threshold screening level (ITSL) for n-butyl bromide is  $9 \mu\text{g}/\text{m}^3$  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 search was conducted for n-butyl bromide, but only limited information was available. An acute oral  $\text{LD}_{50}$  study was obtained through a Toxic Substance Control Act, initial submission report on acute oral toxicity of n-butyl bromide. In this study, male and female rats were orally dosed and the data statistically evaluated. There were neurotoxic clinical signs in the animals, with the primary pathologic lesions being hemorrhagic. The  $\text{LD}_{50}$  was determined to be 2761 mg/kg for male rats (95% C.I.: 2234, 3411), and 3161 mg/kg for female rats (95% C.I.: 2411, 4138).

The ITSL was derived as follows:

$\text{LD}_{50} = 2761 \text{ mg/kg}$

$$\text{ITSL} = \frac{1}{500} \times \frac{1}{40} \times \frac{1}{100} \times \frac{2761}{0.167 \times 0.900} = 0.009 \text{ mg}/\text{m}^3$$

$0.009 \text{ mg}/\text{m}^3 \times 1000 = 9 \mu\text{g}/\text{m}^3$  based on annual averaging.

The ITSL for n-butyl bromide =  $9 \mu\text{g}/\text{m}^3$  based on annual averaging.

References:

Initial Submission: Acute Oral Toxicity Study with N-Butyl Bromide in Rats.  
Final Report with cover letter dated 063092. EPA/OTS Doc 88-920004087.

MB:ma