

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

March 2, 1988

TO: AQD Permit Engineers
AQD District Supervisors

FROM: Catherine Simon

SUBJECT: p-Toluidine (CAS No. 106-49-0)

The compound, p-toluidine, has been shown to be carcinogenic in laboratory animals, and should be considered a potential human carcinogen. A quantitative risk assessment was done to determine the incremental unit risk value for p-toluidine. The incremental unit risk value is defined as the increased risk in a population in which all individuals are exposed continuously for a lifetime to a concentration of 1 ug/m³ of the compound of concern in the air they breathe. The data from the animal carcinogenicity bioassay were fit to the "linearized" multistage model (GLOBAL 82) to estimate the unit risk value for p-toluidine. Based upon this analysis, the 95 percent upper limit incremental unit risk estimate for continuous exposure to 1 ug/m³ of p-toluidine is 3.1×10^{-5} . Utilizing this unit risk value, the concentration of p-toluidine in air resulting in an increased cancer risk of one in one million (1×10^{-6}) is 0.03 ug/m³.

CAS:mh