

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for Toluene (CAS# 108-88-3)

FROM: Doreen Lehner, Toxics Unit, Air Quality Division

DATE: January 27, 2017

SUBJECT: Toluene (CAS# 108-88-3) remaining at 24-hour averaging time

The initial threshold screening level (ITSL) for toluene is 5,000 $\mu\text{g}/\text{m}^3$ based on a 24-hour averaging time. The ITSL was originally established on 9/27/2005 and is based on an EPA reference concentration (RfC) of 5 mg/m^3 . EPA derived their RfC from multiple human studies where the critical effect of exposure is neurological effects in occupationally-exposed workers. "Animal studies have demonstrated reproductive and developmental effects of toluene at exposure levels higher than those used for the determination of the point of departure" (EPA, 2005). As toluene is a developmental and reproductive toxicant, it is appropriate for the ITSL to remain at a 24-hour averaging time.

References:

Act 451 of 1994, Natural Resources and Environmental Protection Act and Air Pollution Control Rules, Michigan Department of Environmental Quality.

EPA. 2005. Integrated Risk Information System. Toluene (CASRN 108-88-3). Available online at: https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=118

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: Toluene file (CAS # 108-88-3)

FROM: Gary Butterfield

DATE: September 27, 2005

SUBJECT: Screening level for toluene

The ITSL entry for toluene CAS # 108-88-3 was changed to match the new RfC, dated September 23, 05. The new ITSL is 5000 ug/m³ with 24 hour averaging. The old ITSL was 400 ug/m³ with 24 hour averaging. See the IRIS printout and IRIS toxicological review for additional details of the RfC calculation.