MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

October 29, 2015

TO: Polychlorinated Biphenyls (PCBs) (CAS # 1336-36-3)

FROM: Mike Depa, Toxics Unit, Air Quality Division

SUBJECT: Screening level for PCBs

The initial Risk Screening Level (IRSL) and Secondary Risk Screening Level (SRSL) for polychlorinated biphenyls (PCBs) are 0.01 and 0.1 µg/m³ with annual averaging time.

The U.S. Environmental Protection Agency (EPA) has classified PCBs as a Group B2, probable human carcinogen (EPA, 1999). Oral exposure studies in animals show an increase in liver tumors in rats and mice and thyroid tumors in male rats exposed to several commercial mixtures of PCBs and to several specific congeners (ATSDR, 1997; EPA, 1999). PCBs are absorbed through inhalation indicating a concern for this route of exposure (ATSDR,1997).

EPA (1999) calculated an upper-bound inhalation unit risk (IUR) of 1.0E-4 $(\mu g/m^3)^{-1}$ for inhalation of evaporated PCB congeners. The IRSL and SRSL were derived as follows:

IRSL = 1E-6/IUR
IRSL = 1E-6/(1E-4 per µg/m³)
IRSL = 0.01 µg/m³

SRSL = 1E-5/IUR
SRSL = 1E-5/(1E-4 per µg/m³)
SRSL = 0.1 µg/m³

References

ATSDR. 1997. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Polychlorinated Biphenyls. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1997.

EPA. 1999. U.S. Environmental Protection Agency. Integrated Risk Information System (IRIS) on PCBs. National Center for Environmental Assessment, Office of Research and Development, Washington, DC.
http://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0294_summary.pdf