

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for 1-Chloro-1,1-difluoroethane (CAS # 75-68-3)

FROM: Robert Sills, AQD Toxics Unit Supervisor

SUBJECT: 1-Chloro-1,1-difluoroethane change in the averaging time from 24 hrs to annual

DATE: December 22, 2016

The ITSL for 1-Chloro-1,1-difluoroethane is 50,000 ug/m<sup>3</sup>, with annual averaging time.

The ITSL for 1-Chloro-1,1-difluoroethane (50,000 ug/m<sup>3</sup>) was established on July 5, 1995 (see attached). The averaging time (AT) assigned to the ITSL at that time was 24 hours, as per the default methodology at that time (Rule 232(2)(b)). The ITSL was based on and consistent with an EPA (1995) RfC, with the key study being a 2-year rat inhalation bioassay. A total uncertainty factor (UF) of 300 was applied by EPA (1995), which consisted of a UF = 3 for interspecies extrapolation, UF = 10 for intraspecies variability, and UF = 10 for database deficiencies. The current file review concludes that the AT for the ITSL may appropriately be set at annual, based on the nature and duration of the key study and the ITSL value derivation, as allowed under Rule 229(2)(b). Therefore, the averaging time is being changed from 24 hrs to annual.

Reference:

EPA. 1995. IRIS database. Chemical file for 1-Chloro-1,1-difluoroethane. Last revised 7/1/95. Retrieved 12/22/16.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

July 5, 1995

TO: 1-Chloro-1,1-difluoroethane file (CAS # 75-68-3)  
FROM: Gary Butterfield  
SUBJECT: Screening level for 1-chloro-1,1-difluoroethane

EPA recently issued an RfC for 1-chloro-1,1-difluoroethane, which is also known under the synonym of HCFC-142b. The ITSL is being established at 50,000  $\mu\text{g}/\text{m}^3$  with a 24 hour averaging time to reflect the new RfC.

The study reported by Seckar et al (1986) is the basis for EPA's RfC. In this study Sprague-Dawley rats were exposed to 0, 1000, 10000 or 20000 ppm for 6 hours/day for 5 day/week for 104 weeks. No adverse effects were observed at the highest dose level, 20000 ppm or 82620  $\text{mg}/\text{m}^3$ . An UF of 300 was applied to the NOAEL(HEC) of 14710  $\text{mg}/\text{m}^3$  to obtain the RfC.

For further details on how the RfC was calculated see the IRIS write-up.

GB:ma