

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for Bromoform (CAS # 75-25-2)
FROM: Robert Sills, AQD Toxics Unit Supervisor
SUBJECT: Screening levels for Bromoform
DATE: September 8, 2015

The cancer risk-based screening levels for bromoform were established on 9/22/92. They are as follows:

IRSL = $0.9 \mu\text{g}/\text{m}^3$, annual averaging time;

SRSL = $9 \mu\text{g}/\text{m}^3$, annual averaging time.

EPA (1991) concluded that bromoform is classified as, "B2; probable human carcinogen" based on inadequate human data and sufficient evidence of carcinogenicity in animals, namely an increased incidence of tumors after oral administration of bromoform in rats and intraperitoneal administration in mice. EPA (1991) provided an inhalation unit risk estimate of $1.1\text{E-}6$ per $\mu\text{g}/\text{m}^3$, based on the rat gavage study and a default 50% absorption rate due to a lack of data to quantify the extent of respiratory absorption. Based on this unit risk estimate (URE), the IRSL and SRSL are derived as follows:

$$\text{IRSL} = \frac{1\text{E-}6}{1.1\text{E-}6 (\mu\text{g}/\text{m}^3)^{-1}} = 0.9 \mu\text{g}/\text{m}^3 \text{ (annual AT)}$$

$$\text{SRSL} = \frac{1\text{E-}5}{1.1\text{E-}6 (\mu\text{g}/\text{m}^3)^{-1}} = 9 \mu\text{g}/\text{m}^3 \text{ (annual AT)}$$

References

EPA. 1991. IRIS database. Chemical entry for acetaldehyde. Carcinogenicity assessment; last revised 1/1/91. Still current as of 9/8/15.