

FACT SHEET

Revision to NJDEP Division of Air Quality Risk Screening Worksheet for Carcinogenic Effects and Noncarcinogenic Long-term and Short-term Effects (Worksheet) as listed in Technical Manual 1003 “Guidance on Preparing a Risk Assessment for Air Contaminant Emissions”.

NOTE: The final revised Worksheet is available on the Department’s website at <https://dep.nj.gov/boss/> under “Program Update” and at <https://dep.nj.gov/airplanning/> under “What’s New.” This Worksheet is an optional tool that regulated facilities can use to demonstrate negligible risk without conducting a refined risk assessment, pursuant to N.J.A.C. 7:27-8.5, for Preconstruction Permits, and N.J.A.C. 7:27-22.8, for Operating Permits. Facilities may choose to initially determine health risks with a refined risk assessment and not use the Worksheet.

The following outlines the changes to the final revised Worksheet along with background information used to support the change:

1. **The methyl bromide acute reference concentration (RfC) listed in the Risk Screening Worksheet will be revised: averaging time of 1-hour 31,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).**

Following the adoption of New Jersey’s fumigation rule, “Permit and Reporting Requirements for Fumigants and Other Hazardous Air Pollutants” (effective April 4, 2022), the DEP received a request to consider alternative methyl bromide reference concentrations due to more recent scientific studies. The Department’s Division of Science and Research (DSR) evaluated toxicology reports which included the California Department of Pesticide Regulation’s (2002) Risk Assessment Characterization of Methyl Bromide, the USEPA’s (2018) Office of Chemical Safety and Pollution Prevention Draft Human Health Risk Assessment for Registration of Methyl Bromide as well as the methyl bromide inhalation study cited in both these documents. Based on this review the DSR recommended that DAQ update the acute methyl bromide RfC. The proposed acute (1-hour) methyl bromide RfC of $31,000 \mu\text{g}/\text{m}^3$ ($31 \text{ mg}/\text{m}^3$ or 8 ppm) was derived from data provided in the USEPA (2018) document and determined to be scientifically supportably and protective of public health.

2. **“Toxicity Values for Inhalation Exposure” updates**

The following table “Updated Toxicity Values” outlines the air toxics whose toxicity values have been updated, type of toxicity value, the current and proposed toxicity values, and the source and issuance date of the revised toxicity values.

Revised Toxicity Value

Air Toxic	Type of toxicity value -*	Toxicity Value		Source, Date proposed by source, Comment -**
		Previous	Revised	
Methyl bromide	RfC _{st}	3,900	31,000	USEPA (2018), revised RfC _{st} is 1-hour average. Previous RfC _{st} value is a 1-hour average from CalEPA.

* URF – Unit Risk Factor – (microgram per cubic meter - $\mu\text{g}/\text{m}^3$)⁻¹
 RfC – Reference concentration – chronic - $\mu\text{g}/\text{m}^3$
 RfC_{st} – Reference concentration, acute, short-term – $\mu\text{g}/\text{m}^3$

** CalEPA – California Environmental Protection Agency, Office of Environmental Health Hazard Assessment
 IRIS – Integrated Risk Information System, United States Environmental Protection Agency
 ATSDR – Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services
 AEGL – Acute Exposure Guideline Level

*** Toxicity values apply to each isomer or a combination of any isomer mixture, whichever is higher

Reference

USEPA (2018) – United States Environmental Protection Agency, Office of Chemical Safety and Pollution Prevention. “Draft Human Health Risk Assessment for Registration of Methyl Bromide.” December 2018. DP No. D449330. <https://www.regulations.gov/document/EPA-HQ-OPP-2017-0447-0013>