On November 3, 2022, the Department posted the Notice of Revision to the NJDEP Division of Air Quality Risk Screening Worksheet for Long-Term Carcinogenic and Noncarcinogenic Effects and Short-Term Effects (RSW) as listed in Technical Manual 1003 "Guidance on Preparing a Risk Assessment for Air Contaminant Emissions" 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." In addition, the Department announced the Notice of Revision in a November 3, 2022 Air Quality Regulation Listserv email. Through the Notice of Revision, the Department outlined the following proposed change to the Risk Screening Worksheet, along with background information 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 ($\mu g/m^3$).

The deadline in the Notice of Revision for submission of comments on the proposed change was December 5, 2022.

Summary of Public Comments and Agency Reponses:

The following individuals provided written comments:

1. Shannon Sked, Western Fumigation

2. Peter J. Inskeep, Gloucester Terminals

3. Bill Wolfe

Support for the proposed change

1. **COMMENT:** The New Jersey Department of Environmental Protection ("Department") has proposed to revise the current methyl bromide short-term (acute) reference concentration from 3,900 $\mu g/m^3$ to 31,000 $\mu g/m^3$. This action is supported by health risk assessment data and research including EPA's 2018 Draft Human Health Risk Assessment for methyl bromide, as well as research papers critically evaluating the Department's reference concentrations used prior to this update. In contrast, the current short-term reference concentration is too stringent and based on "overly stringent and erroneous and is based on flawed science." Gloucester Terminals previously submitted a research paper, prepared by Arcadis toxicologist Dr. Brian Magee, titled "Critical Evaluation of New Jersey Department of Environmental Protection's Short Term Reference Concentration for Methyl Bromide Adopted from California's Acute Reference Exposure Level." In this research paper, "Dr. Magee explains the significant flaws in the existing acute reference concentration, which NJDEP simply adopted from the California Office of Environmental Health Hazard Assessment (OEHHA) without conducting its own scientific review. As Dr. Magee explains, OEHHA derived the reference concentration derived by the California Office of Environmental Health Hazard Assessment (OEHHA) in a scientifically inappropriate manner. Although the Department's goal of ensuring safe conditions for the community is shared, the Department's reliance on scientifically unsupported risk standards harms the regulated community. The Department should have conducted an independent review of OEHHA's short-term methyl bromide reference concentration prior to utilizing it in the Risk Screening Worksheet in the first instance. This failure resulted in unnecessary, costly investments by the regulated community. (1 and 2)

RESPONSE: The Department acknowledges the support for updating the presumptive short-term reference concentration for methyl bromide in the Risk Screening Worksheet. The Department is committed to using the best available science when revising toxicity factors incorporated into the Risk Screening Worksheet and will continue to propose updates using well-established federal and state sources including EPA's Integrated Risk Information System (IRIS), California Environmental Protection Agency (CalEPA), and the Agency for Toxic Substances and Disease Registry (ASTDR). Permit applicants may continue to propose to use alternative toxicity values by providing documentation and risk assessment/modeling in support of such use. The Department will review and evaluate if such proposed toxicity values are appropriate for use in risk assessment.

Request to update the chronic reference concentration for methyl bromide

2. **COMMENT:** The Department should conduct a comprehensive and scientific review of the methyl bromide chronic reference concentration currently used for risk assessments as it is believed to be scientifically flawed. A research paper prepared by Dr. Magee, titled "Critical Evaluation of Chronic Reference Concentration for Methyl Bromide Derived by U.S. Environmental Protection Agency" suggests that the methyl bromide chronic reference concentration should be within the range of 0.082 to 0.298 mg/m^3 which is 17 to 62 times greater than the Department's current chronic reference concentration. (1 and 2)

   RESPONSE: The Department's Division of Science and Research (DSR) has reviewed and evaluated the submitted report and has concluded that alternative chronic reference concentrations of 0.082 to 0.298 mg/m^3 (82 to 298 $\mu g/m^3$) are not appropriate for use in evaluating exposure risks of residential bystanders of a structural fumigation as they are not sufficiently protective of public health. The DSR recommends that the Department continue to use the US Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS) chronic reference concentration of 0.005 mg/m^3 (5 $\mu g/m^3$). Air permit applicants may continue to propose to use an alternate reference concentration on a case-by-case basis by providing appropriate documentation and risk assessment in support of such use.

Technical advisory committee

3. **COMMENT:** The Department should "form a technical advisory committee consisting of qualified individuals from the regulated and scientific communities that would assist the NJDEP and its Division of Science and Research in reviewing toxicological information supporting the establishment of air inhalation risk values." This committee would increase the technical and scientific resources available to the Department, promote transparency of the process for revising risk assessment toxicity factors, and ensure that the most recent scientific information and techniques are considered in the decision making. The committee can meet periodically. This approach has been proven effective with other state environmental agencies including the Pennsylvania Department of Environmental Protection. (2)

   RESPONSE: To develop unit risk factors (URFs), reference concentrations (RfCs), slope factors (SFs), and reference doses (RfDs), toxicological studies are evaluated by groups assigned for this purpose within USEPA and other agencies. The Department compiles inhalation information available from EPA's Integrated Risk Information System (IRIS), California Environmental

Protection Agency (CalEPA), and the Agency for Toxic Substances and Disease Registry (ATSDR) into lists of unit risk factors and reference concentrations to guide applicants as they assess risk. See Technical Manual 1003 at p. 9; Toxicity Values for Inhalation Exposure (December 2022), https://dep.nj.gov/boss/risk-screening-tools/. The Department will continue providing the risk screening worksheet as an optional screening tool and periodically update the reference concentrations and unit risk factors, which are derived from well-established Federal and State sources. Permit applicants may continue to propose to use alternative toxicity values by providing documentation and risk assessment/modeling in support of such use. The Department will review and evaluate if such proposed toxicity values are appropriate for use in risk assessment.

Other

4. **COMMENT:** The Department's approach to risk assessment, including the Risk Screening worksheet, the risk assessment methodology, and risk reduction requirements, is flawed. (3)

   RESPONSE: The Risk Screening Worksheet is an optional screening tool that permit applicants may use for stationary sources. This screening tool uses generalized worst-case assumptions and straight forward worksheet calculations to estimate cancer and non-cancer health risks from the inhalation of air toxics listed in a permit application. In lieu of source specific dispersion modeling, normalized air impact values are used to estimate dispersion of emitted air toxics and the resulting ambient air concentrations. The screening process is designed to minimize the likelihood of erroneously approving source operations that could potentially pose a significant health risk by overestimating the risk. This ensures that any source operation that requires further evaluation will be identified. The health risk screening procedures are described in New Jersey Technical Manual 1003 (Guidance on Preparing a Risk Assessment for Air Contaminant Emissions), https://dep.nj.gov/boss/risk-screening-tools/.