# TCEQ Interoffice Memorandum

**To:** Lori Wilson, Regional Director, R11

**From:** Anthony Tran, M.S.

Toxicology, Risk Assessment, and Research Division, Office of the Executive Director

**Date:** May 8, 2025

**Subject:** Health Effects Review of 2023 Ambient Air Network Monitoring Data in Region 11, Austin

## Conclusion

- All 24-hour and annual average concentrations of 84 volatile organic compounds (VOCs) from canister samples were below their respective Texas Commission on Environmental Quality (TCEQ) Air Monitoring Comparison Values (AMCVs) and would not be expected to cause adverse health or welfare effects.

## Background

This memorandum conveys the Toxicology, Risk Assessment, and Research Division's (TD's) evaluation of ambient air sampling conducted at the Region 11 monitoring site in Austin during 2023. The TD evaluated ambient air sampling data for VOCs collected at the Austin Webberville Road monitoring site on a 24-hour, every sixth-day schedule. TCEQ Region 11 monitoring site information is presented in Table 1 along with a hyperlink to detailed information regarding the monitoring site and maps. The target analytes are listed in Attachment A.

**Table 1. Monitoring Sites Located in TCEQ Region 11**

| Site Name and Location | County | EPA Site ID | Monitored Compounds |
|---|---|---|---|
| Austin Webberville Road<br>2600B Webberville Rd | Travis | 48-453-0021 | VOC [a] |

[a] Every sixth-day 24-hour canister

The TCEQ Monitoring Division reported the data for all chemicals evaluated in this memorandum. The data collected for the 84 VOCs at the Austin Webberville Road monitoring site met the data completeness objective of 75 percent data return, or at least 45 valid samples per year.

Twenty-four-hour air samples collected every sixth day for a year, are designed to provide representative long-term average concentrations. To enable evaluation of the 24-hour monitoring data more fully, the TCEQ has developed 24-hour AMCVs for specific chemicals. As such, 24-hour samples were compared to the available TCEQ 24-hour AMCVs for 1,3-butadiene; 2,2-dimethylbutane; 2,3-dimethylbutane; 2-methylpentane; 3-methylpentane; benzene; carbon

tetrachloride; ethylene dibromide; ethylene dichloride; and n-hexane. Short-term or peak concentrations are not necessarily captured by 24-hour samples; thus, daily concentrations have limited use in evaluating the potential for more acute health effects. The TD evaluated the reported annual average concentrations from 24-hour samples for each target analyte for potential chronic health and vegetation concerns by comparing annual averages of measured chemical concentrations to their respective long-term AMCVs. More information about AMCVs is available on the Toxicology AMCV webpage (https://www.tceq.texas.gov/toxicology/amcv/about)

## Evaluation

The 24-hour and annual average concentrations of the 84 VOCs, reported at the Austin Webberville Road monitoring site for 2023, were below their respective AMCVs. Therefore, adverse health or welfare effects would not be expected to occur as a result of short- or long-term exposure to the reported levels of these chemicals.

If you have any questions about this evaluation, please contact me at (512) 239-1790 or at anthony.tran@tceq.texas.gov.

## Attachment A

**List 1. Target VOC Analytes in Canister Samples**

1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethylene
1,2,3-Trimethylbenzene
1,2,4-Trimethylbenzene
1,2-Dichloropropane
1,3,5-Trimethylbenzene
1,3-Butadiene
1-Butene
1-Hexene & 2-Methyl-1-Pentene
1-Pentene
2,2,4-Trimethylpentane
2,2-Dimethylbutane
2,3,4-Trimethylpentane
2,3-Dimethylbutane
2,3-Dimethylpentane
2,4-Dimethylpentane
2-Chloropentane
2-Methyl-2-Butene
2-Methylheptane
2-Methylhexane
2-Methylpentane
3-Methyl-1-Butene
3-Methylheptane
3-Methylhexane
3-Methylpentane
4-Methyl-1-Pentene
Acetylene
Benzene
Bromomethane
Carbon Tetrachloride
Chlorobenzene
Chloroform
Chloromethane
Cyclohexane
Cyclopentane
Cyclopentene
Dichlorodifluoromethane
Dichloromethane
Ethane
Ethylbenzene
Ethylene
Ethylene Dibromide
Ethylene Dichloride
Isobutane
Isopentane
Isoprene
Isopropyl benzene
Methyl Chloroform
Methylcyclohexane
Methyl cyclopentane
Propane
Propylene
Styrene
Tetrachloroethylene
Toluene
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride
cis-1,3-Dichloropropene
cis-2-Butene
cis-2-Hexene
cis-2-Pentene
m-Diethylbenzene
m-Ethyltoluene
m/p Xylene
n-Butane
n-Decane
n-Heptane
n-Hexane
n-Nonane
n-Octane
n-Pentane
n-Propylbenzene
n-Undecane
o-Ethyltoluene
o-Xylene
p-Diethylbenzene
p-Ethyltoluene
trans-1,3-Dichloropropylene
trans-2-Butene
trans-2-Hexene
trans-2-Pentene