

# TCEQ Interoffice Memorandum

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**To:** David Van Soest, Regional Director, R11  
Lori Wilson, Assistant Regional Director, R11

**From:** Angela Curry, M.S. *ac*  
Toxicology, Risk Assessment, and Research Division, Office of the  
Executive Director

**Date:** May 24, 2021

**Subject:** Toxicological Evaluation of 2017-2019 Ambient Air Network Monitoring  
Data in Region 11, Austin

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## Conclusion

- All 24-hour, annual, and three-year average concentrations of 84 volatile organic compounds (VOCs) from canister samples collected in Region 11 – Austin were below their respective Texas Commission on Environmental Quality (TCEQ) Air Monitoring Comparison Values (AMCVs) and would not be expected to cause adverse health effects 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 2017, 2018, and 2019. The TD evaluated summary results 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 hyperlinks 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
<a href="#">Austin Webberville Road 2600B</a> <a href="#">Webberville Rd</a>	Travis	48-453-0021	VOC (24-h 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. Short-term or peak concentrations are not necessarily captured by 24-hour samples; thus, daily concentrations have limited use in

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evaluating the potential for acute health effects. In order to be able to evaluate 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 (1,3-butadiene, 2,2-dimethylbutane, 2,3-dimethylbutane, 2-methylpentane, 3-methylpentane, benzene, ethylene dibromide, ethylene dichloride, and n-hexane). The TD evaluated the reported annual and three-year 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.

## **Evaluation**

The 24-hour, annual and three-year average concentrations of the 84 VOCs, reported at the Austin Webberville Road monitoring site for 2017- 2019, 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) 239-1306 or at [angela.curry@tceq.texas.gov](mailto:angela.curry@tceq.texas.gov).

**Attachment A****Target VOC Analytes in Canister Samples**

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