

# TCEQ Interoffice Memorandum

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**To:** Lorinda Gardner, Regional Director

**From:** Sabine Lange, Ph.D. *SL*  
Toxicology Division, Office of the Executive Director

**Date:** June 6, 2014

**Subject:** Health Effects Review of 2013 Ambient Air Network Monitoring Data in Region 7, Midland

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## Conclusions

- Exposure to monitored levels of the 46 reported volatile organic compounds (VOCs) for Region 7, Midland would not be expected to cause acute or chronic adverse health effects, vegetation effects, or odor conditions.

## Background

This memorandum conveys the Toxicology Division's (TD) evaluation of ambient air sampling conducted at the network monitoring site in Region 7, Midland during 2013. The TD evaluated summary results for VOCs collected at the Odessa-Hays monitoring site, which is an hourly automated gas chromatograph (autoGC) site. TCEQ Region 7 monitoring site information is presented in Table 1, along with a hyperlink to the monitoring site map and detailed information. List 1, in Attachment A, gives the target analytes for the monitoring site.

**Table 1. Monitoring Sites Located in TCEQ Region 7**

City and Site Location	County	Monitor ID	Monitored Compounds
<a href="#">Odessa-Hays</a> , Barrett and Monahans Streets	Ector	48-135-0003	VOCs (hourly autoGC)

The TCEQ Monitoring Division reported the data for all chemicals evaluated in this memorandum. Of the 46 VOCs sampled for the monitoring site, all but two met the data completeness objective of 75 percent data return, or at least 6,570 valid samples per year. The two that did not were 2-methylheptane, and 2,4-dimethylpentane. Therefore, annual average data for 2-methylheptane and 2,4-dimethylpentane were not evaluated. The available data for the 44 VOCs at the Odessa-Hays site are expected to provide representative annual average VOC concentrations. Hourly concentrations for 46 of the reported VOCs and annual average concentrations for 44 of the reported VOCs were compared to their respective short-term and

long-term Air Monitoring Comparison Values (AMCVs). More information about AMCVs is available online at: <http://www.tceq.state.tx.us/implementation/tox/AirToxics.html#amcv>.

## **Evaluation**

### **Short-Term Data**

All of the measured hourly concentrations of each of the reported 46 VOCs evaluated were well below their respective short-term AMCVs. Therefore, adverse health or welfare effects would not be expected to occur as a result of short-term exposure to the reported levels of these chemicals.

### **Long-Term Data**

All of the 2013 annual average concentrations of the reported 44 VOCs evaluated were well below their respective long-term AMCVs. Therefore, adverse health effects would not be expected to occur as a result of long-term exposure to the reported levels of these chemicals.

If you have any questions about this evaluation, please contact me at (512) 239-3108 or [sabine.lange@tceq.texas.gov](mailto:sabine.lange@tceq.texas.gov).

## Attachment A

### List 1. Target VOC Analytes for AutoGC Samples

1-Butene	c-2-Butene	n-Hexane
1-Pentene	c-2-Pentene	n-Nonane
1,2,3-Trimethylbenzene	Cyclohexane	n-Octane
1,2,4-Trimethylbenzene	Cyclopentane	n-Pentane
1,3-Butadiene	Ethane	n-Propylbenzene
1,3,5-Trimethylbenzene	Ethyl Benzene	o-Xylene
2-Methylheptane	Ethylene	p-Xylene + m-Xylene
2-Methylhexane	Isobutane	Propane
2,2-Dimethylbutane	Isopentane	Propylene
2,2,4-Trimethylpentane	Isoprene	Styrene
2,3-Dimethylpentane	Isopropyl Benzene	t-2-Butene
2,3,4-Trimethylpentane	(Cumene)	t-2-Pentene
2,4-Dimethylpentane	Methylcyclohexane	Toluene
3-Methylheptane	Methylcyclopentane	
3-Methylhexane	n-Butane	
Acetylene	n-Decane	
Benzene	n-Heptane	