


# Texas Commission on Environmental Quality

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## INTEROFFICE MEMORANDUM

**To:** Jeff Bertl, Regional Director, R7  
Alice Cone, Air Section Manager, R7  
Randy Ammons, Area Director

**Date:** December 15, 2009

**From:** Lindsey Jones, M.S.   
Toxicology Division, Chief Engineer's Office

**Subject:** Health Effects Review of 2008 Ambient Air Network Monitoring Sites in Region 7-Midland

### Conclusions

- All reported one-hour and annual average concentrations of monitored volatile organic compounds (VOCs) were below the respective appropriate comparison values at the Odessa-Hays and Odessa-Gonzales monitoring sites.
- Exposure to the monitored levels of VOCs at these monitoring locations would not be expected to cause adverse health effects, nuisance odor conditions, or vegetative effects.

### Background

The Toxicology Division (TD) has reviewed ambient air sampling data collected from two network monitoring sites in TCEQ Region 7-Midland from January 1 through December 31, 2008. Table 1 lists the sampling locations and provides a link to more information on the sites. Figures 1 and 2 are street-level maps indicating the specific locations of the Odessa-Hays and Odessa-Gonzales monitoring sites.

TD reviewed air monitoring summary results for 46 VOCs from 40-minute samples collected every hour by the two automated gas chromatographs (autoGCs). The list of target analytes at these monitoring locations is included in Table 2. All VOC data evaluated in this memorandum exceeded TCEQ's annual data completeness objective of 75 percent, except for acetylene at the Odessa-Gonzales site. Therefore, annual average data for acetylene at the Odessa-Gonzales site were not evaluated. The available data for the 46 VOCs at the Odessa-Hays site and the remaining 45 VOCs at the Odessa-Gonzales site are expected to provide representative annual average VOC concentrations. TD compared the measured hourly concentrations for 46 VOCs and annual averages for VOCs that met the annual data completeness objective to their respective short-term and long-term appropriate comparison values.

**Table 1: Monitoring Site Information for TCEQ Region 7**

County	City and Site Location	EPA Site ID	Monitored Compounds
Ector	<a href="#">Odessa-Hays, Barrett and Monahans Streets</a>	48-135-0003	VOCs
Ector	<a href="#">Odessa-Gonzales, 2700 Disney</a>	48-135-1014	VOCs

## Evaluation

### *One-Hour Data*

Measured one-hour concentrations of each of the 46 VOCs reviewed were below their respective short-term comparison values. Therefore, acute adverse health effects, odorous conditions, or vegetative effects are not expected to occur as a result of exposure to the reported levels of these chemicals at the Odessa-Hays or Odessa-Gonzales monitoring sites.

### *Annual Average Data*

The annual average concentrations of the 46 VOCs evaluated at the Odessa-Hays monitoring site and the 45 VOCs evaluated at the Odessa-Gonzales monitoring site were well below their respective long-term comparison values. Therefore, adverse health effects are not expected to occur as a result of long-term exposure to the reported levels of these chemicals at the Odessa-Hays or Odessa-Gonzales monitoring sites.

If you have any questions regarding the contents of this review, please do not hesitate to contact me at (512) 239-1784 or via email at [ljones@tceq.state.tx.us](mailto:ljones@tceq.state.tx.us).

cc (via email):

Casso, Ruben- EPA Region 6, Dallas

Prosperie, Susan – Department of State Health Services

**Table 2: List of Monitored VOCs (autoGC)**

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



**Figure 1: Location of the VOC Monitoring on Disney Street (Odessa-Gonzales)**



**Figure 2: Location of the VOC Monitoring at Barrett and Monahans Street (Odessa-Hays)**