

# TCEQ Interoffice Memorandum

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**To:** David Ramirez, Regional Director  
Rose Luna-Pirtle, Air/Water/Waste Section Manager  
Ramiro Garcia, Border and South Central Texas Area Director

**From:** Carla Kinslow, Ph.D.   
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**Date:** March 4, 2011

**Subject:** Health Effects Review of 2009 Ambient Air Network Monitoring Data in  
Region 16, Laredo

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## Conclusions

- During 2009, ambient air monitoring was conducted for volatile organic compounds (VOCs), semi-volatile compound (SVOCs) [including polycyclic aromatic hydrocarbons (PAHs)], and antimony and arsenic in total suspended particulate (TSP) at the Zaragosa Street (Laredo Bridge) and West End Washington Street monitoring sites. Exposure to the reported 2009 annual average concentrations of these chemicals would not be expected to cause chronic adverse human health or vegetative effects.

## Background

This memorandum conveys the Toxicology Division's (TD's) evaluation of ambient air sampling conducted at two Community Air Toxics Monitoring Network (CATMN) sites in Laredo during 2009. Table 1 contains information regarding the two sites located in TCEQ Region 16, as well as hyperlinks to maps and additional detailed information about each site. The TCEQ Field Operations Support Division reported the data for all chemicals evaluated in this memorandum. The TD reviewed air monitoring summary results for 84 VOCs from 24-hour canister samples collected every sixth day, 16 PAHs/SVOCs from 24-hour samples collected every sixth day, and two speciated metals from 24-hour TSP samples collected every sixth day at the West End Washington Street site in Laredo. In addition, the TD reviewed air monitoring summary results for 84 VOCs from 24-hour canister samples collected every sixth day at the Zaragosa Street (Laredo Bridge) site. All data collected for both monitoring sites met the data completeness objective of 75 percent data return. For a complete list of all examined chemicals, please see Attachment A. This memorandum evaluates air monitoring data on a chemical-by-chemical basis.

Because 24-hour air samples are designed to provide representative long-term average concentrations, annual averages from 24-hour samples were evaluated for potential chronic health concerns. Short-term or peak concentrations are not captured by 24-hour samples; therefore, daily maximum concentrations have limited use in evaluating the potential for acute health effects. For all VOCs, PAHs/SVOCs, and speciated TSP metals, annual average concentrations were compared to their respective 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>.

**Table 1. Monitoring Sites Located in TCEQ Region 16**

City and Site Location	County	EPA Site ID	Monitored Compounds
<a href="#">Laredo, West End</a> Washington Street	Webb	48-479-0016	VOCs, PAHs, Metals (TSP)
<a href="#">Laredo, 700 Zaragosa Street,</a> Bridge	Webb	48-479-0017	VOCs

## Evaluation

### Washington Street Site

The 2009 annual average concentrations of all detected VOCs, PAHs, and metals were below their respective long-term AMCVs and would not be expected to pose chronic adverse human health or vegetative concerns.

### Zaragosa Street – Bridge Site

The 2009 annual average concentrations of all detected VOCs were below their respective long-term AMCVs and would not be expected to pose chronic adverse human health or vegetative concerns.

If you have any questions regarding the contents of this review, please do not hesitate to contact me at (713-422-8976) or via email at [carla.kinslow@tceq.texas.gov](mailto:carla.kinslow@tceq.texas.gov).

cc (via email):

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## Attachment A

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

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

### List 2. Target Metal Analytes

Antimony (TSP)  
 Arsenic (TSP)

**List 3. Target PAH Analytes**

Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo (a) anthracene  
Benzo (a) pyrene  
Benzo (b) fluoranthene  
Benzo (ghi) perylene  
Benzo (k) fluoranthene  
Chrysene  
Dibenzo (a,h) anthracene  
Fluoranthene  
Fluorene  
Indeno (1,2,3-cd) pyrene  
Naphthalene  
Phenanthrene  
Pyrene