


TCEQ Interoffice Memorandum

To: Joel Anderson, Director, Region 13, San Antonio
George Ortiz, Air Section Manager, Region 13, San Antonio
Susan Jablonski, P.E., Central Texas Area Director

From: Allison Jenkins, MPH 
Toxicology Division, Office of the Executive Director

Date: June 11, 2013

Subject: Health Effects Review of 2012 Ambient Air Network Monitoring Data in
Region 13, San Antonio

Conclusions

- Exposure to the annual average concentrations of 84 volatile organic compounds (VOCs) monitored in 2012 at the Community Air Toxics Monitoring Network (CATMN) site located at 911 Old Highway 90 West in San Antonio would not be expected to cause chronic adverse health or vegetation effects.

Background

The Toxicology Division (TD) reviewed ambient air sampling data collected in 2012 at the CATMN site located at 911 Old Highway 90 in TCEQ Region 13, San Antonio. The TD reviewed air samples for 84 VOCs collected for 24 hours every six days. The list of 84 target VOC analytes can be found in Attachment A. The samples are designed to provide representative long-term average concentrations, thus, annual averages from the 24-hour samples were evaluated for potential chronic health and vegetation concerns. For all VOCs, the annual average concentrations were compared to their respective long-term air monitoring comparison values (AMCVs). The TCEQ Monitoring Division reported data for all VOCs evaluated in this memorandum. All data evaluated from the CATMN monitoring site met TCEQ's 75 percent annual data completeness objective and were considered in this evaluation.

More information about AMCVs is available online at:
<http://www.tceq.state.tx.us/implementation/tox/AirToxics.html#amcv>.

In addition to the CATMN site, the United States Environmental Protection Agency (USEPA) initiated a special lead monitoring study in 2012 to measure potential lead impacts near airports across the US. One monitor, measuring lead in total suspended particulate (TSP) samples collected for a 24-hour period every sixth day, is located near Stinson Municipal Airport, 1441 99th Street, in San Antonio (see Table 1). Air monitoring at the site began July 23, 2012, and is expected to continue for one year.

Table 1. CATMN Site and USEPA Special Purpose Monitor Located in TCEQ Region 13

City and Site Location	County	EPA Site ID	Monitored Compounds
San Antonio , 911 Old Highway 90 West	Bexar	48-029-0677	VOCs (24-hour canister samples)
San Antonio , 1441 99 th Street	Bexar	48-029-1052	Lead (TSP) Special Purpose Monitor

Evaluation

Long-Term Data from CATMN Site

All 2012 annual average concentrations of the 84 VOCs evaluated at the monitoring site were below their respective long-term AMCVs. Therefore, adverse health or vegetation effects would not be expected to occur as a result of long-term exposure to the reported levels of these chemicals.

Special Purpose Monitor for Monitoring of Lead near Airports

Lead, measured in TSP samples collected beginning July 23, 2012 through December 31, 2012, was below a level of health concern.

If you have any questions regarding the contents of this review, please contact me at 512.239.0656 or via email at allison.jenkins@tceq.texas.gov.

cc (via email):

Casso, Ruben- EPA Region 6, Dallas
 Beauchamp, Richard – TX Department of State Health Services
 Bradford, Carrie – TX Department of State Health Services

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

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