Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Richard Garcia, Director
Rick Hite, Air Section Manager
TCEQ Region 13–San Antonio
Frank Espino, Area Director

Date: September 29, 2006

From: Bernard J. Kadlubar, M.S.
Toxicology Section, Chief Engineer's Office

Subject: Health Effects Review of 2005 Ambient Air Network Monitoring in Region 13-San Antonio

Conclusions

Annual reported volatile organic compounds (VOCs) were monitored at levels below health-based screening values and would not be expected to cause adverse health effects.

Background Information

This memorandum conveys the Toxicology Section (TS) evaluation of ambient air sampling conducted at the network monitoring site in Region 13–San Antonio during 2005. TS reviewed summary results for 96 monitored VOCs from 24-hour canister samples collected every sixth day from the Community Air Toxics Monitoring Network (CATMN). Information about this site is listed in Table 1. This site has been active since January 1, 1996. Table 2 is a list of the target analytes that were evaluated for this review. Twenty-four-hour air samples, collected every sixth day, are designed to provide representative long-term average concentrations appropriate for evaluating potential chronic health concerns.

Table 1: Monitoring Site Information for TCEQ Region 15

County	City and Site Location	EPA Site ID	Monitored Compounds
Bexar	San Antonio, 254 Seale Road Van Dyke Service Center	48-029-0051	VOCs

For all VOCs the 24-hour maximum and available annual average concentrations were compared to their respective short-term and long-term TCEQ health-based Effects Screening Levels (ESLs). All monitored chemicals met the TCEQ data completeness objective of 75 percent data return, or 45 valid samples per year.

Evaluation

Of the 96 VOCs, 69 were not detected. The annual average concentrations for the 27 detected VOCs were measured below their respective long-term ESLs and are not a health concern. Overall, we do not anticipate any long-term health concerns from monitored levels of VOCs in Region 13-San Antonio.

Information on the ESLs can be obtained by contacting the TCEQ Toxicology Section (512-239-1795) or visiting the TCEQ website (www.tceq.state.tx.us/implementation/tox/esl/ESLMain.html).

If you have any questions regarding this review, please do not hesitate to contact me at (512) 239-1075 or email me at bkkadlubar@tceq.state.tx.us.

Table 2: Target Analytes for Community Air Toxic Monitoring Network

CATMN VOCs	
1,1,1-Trichloroethane	Isopentane
1,1,2,2-tetrachloroethane	Isoprene
1,1,2-Trichloroethane	Isopropylbenzene
1,1-Dichloroethylene	Methyl Butyl Ketone (MBK)
1,2,3-Trimethylbenzene	Methyl t-Butyl ether
1,2,4-Trimethylbenzene	Methylcyclohexane
1,2-Dibromoethane	Methylcyclopentane
1,2-Dichloroethane	Methylene Chloride
1,2-Dichloropropane	Methylisobutylketone
1,3,5-Trimethylbenzene	Propane
1,3-Butadiene	Propylene
1-Butene	Styrene
1-Hexene+2-methyl-1-pentene	Tetrachloroethylene - Perchloroethylene
1-Pentene	Toluene
2,2,4-Trimethylpentane	Trichloroethylene
2,2-Dimethylbutane - Neohexane	Trichlorofluoromethane
2,3,4-Trimethylpentane	Vinyl Chloride
2,3-Dimethylbutane	c-2-Butene
2,3-Dimethylpentane	c-2-Hexene
2,4-Dimethylpentane	c-2-Pentene
2-Butanone	Dichlorodifluoromethane
2-Chloropentane	Isobutyraldehyde
2-Methyl-2-Butene	m-Diethylbenzene
2-Methylheptane	m-Ethyltoluene
2-Methylhexane	m-Ethyl chloride
2-Methylpentane - Isohexane	n-Butane
2-Methyl-3-hexanone	n-Decane
3-Methyl-1-Butene	n-Heptane
3-Methylheptane	n-Hexane
3-Methylhexane	n-Nonane
3-Methylpentane	n-Octane
3-Hexanone	n-Pentane
3-Pentanone	n-Propyl Acetate
4-Methyl-1-Pentene	n-Propylbenzene
Acetylene	n-Undecane
Benzene	o-Ethyltoluene
Bromomethane	o-Xylene
Butyl Acetate	p-Diethylbenzene
Butyraldehyde	p-Ethyltoluene
CIS 1,3-dichloropropylene	p-Xylene + m-Xylene
Carbon Tetrachloride	t-2-Butene
Chlorobenzene	t-2-Hexene
Chloroform	t-2-Pentene
Chloroprene	trans-1-3-Dichloropropylene
Cyclohexane	
Cyclopentane	
Cyclopentene	
Ethane	
Ethyl Acetate	
Ethyl Benzene	
Ethylene	
Isobutane	

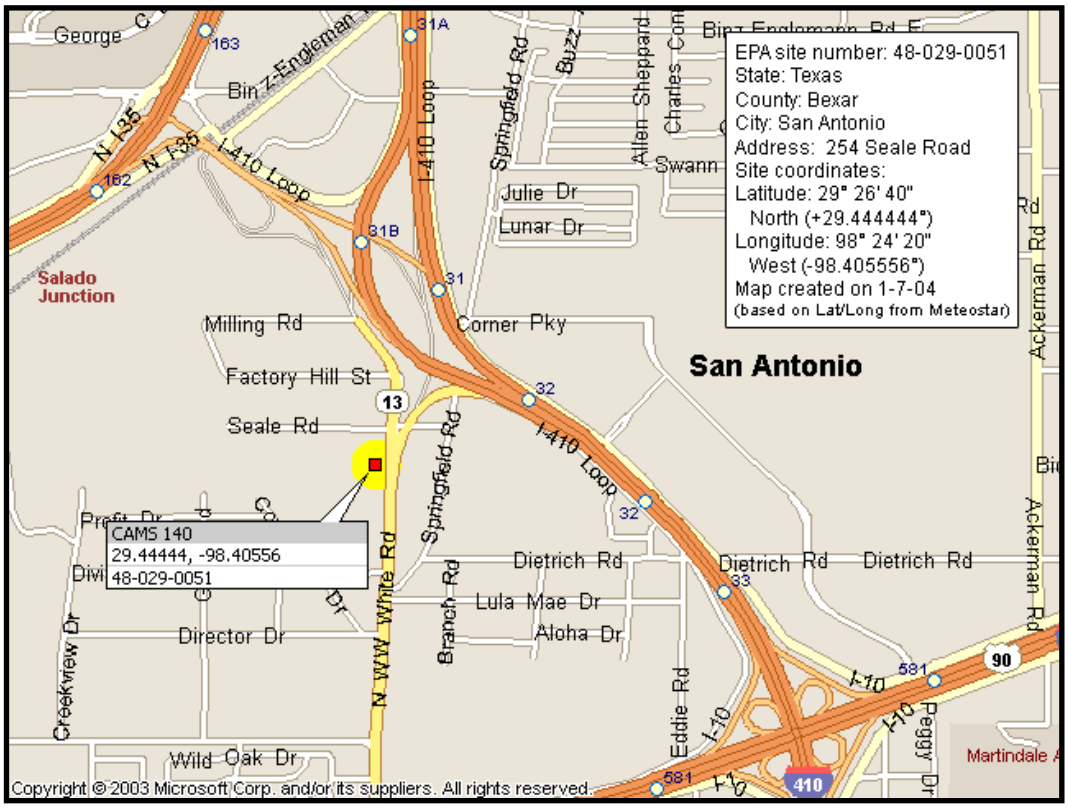

Figure 1. Location of Van Dyke Service Center CATMN monitor

cc (via e-mail):
Casso, Ruben – EPA Region 6, Dallas
Prosperie, Susan – Department of State Health Services