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: May 24, 2007

From: Shannon Ethridge, M.S.
Toxicology Section, Chief Engineer's Office

Subject: Health Effects Review of 2006 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 2006 (Figure 1). TS reviewed summary results for 95 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 in order to appropriately evaluate potential chronic health concerns.

Table 1: Monitoring Site Information for TCEQ Region 13

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 annual average concentrations were compared to their respective long-term TCEQ 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 95 reported VOCs, 83 were not detected. The annual average concentrations for the 12 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) 239-1822 or email me at sethridg@tceq.state.tx.us.

Table 2: Target Analytes for Community Air Toxic Monitoring Network

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

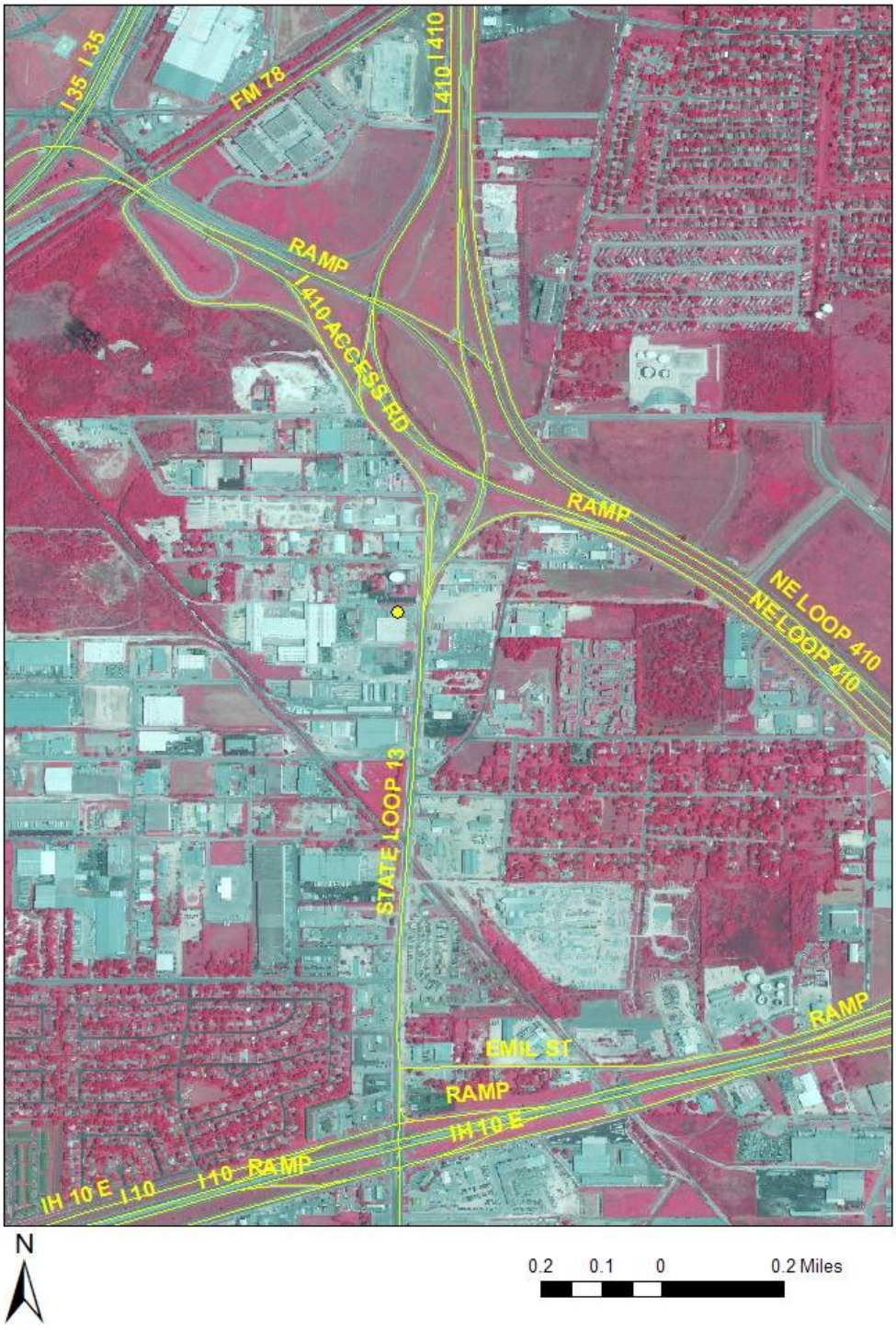

Figure 1. Location of Van Dyke Service Center CATMN monitor

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