

# Texas Commission on Environmental Quality

## INTEROFFICE MEMORANDUM

**To:** Patty Reeh, Regional Director  
Barry Kalda, Regional Air Manager  
TCEQ Region 11 - Austin  
Frank Espino, North Central Texas Area  
Director

**Date:** October 3, 2006

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

**Subject:** Health Effects Review of 2005 Ambient Air Network Monitoring Data in Region 11, Austin

### Conclusion

Annual average concentrations of all 96 reported volatile organic compounds (VOCs) were below their long-term Effects Screening Levels (ESLs) and are not a health concern.

### Background

This memorandum conveys the Toxicology Section's evaluation of ambient air sampling conducted at one Community Air Toxics Monitoring Network (CATMN) site in Region 11–Austin during 2005. Summary results were evaluated for VOCs collected every sixth day from a site located at 2600 B Webberville Road in Austin, Texas. Information about the monitoring site, the only location in TCEQ Region 11 with a monitor, is presented in Table 1. The specific chemicals evaluated are listed in Table 2 and the location of the site is shown in Figure 1. This memorandum evaluates air monitoring data on a chemical-by-chemical basis.

| City and Site Location                   | County | Monitor ID  | Monitored Compounds |
|------------------------------------------|--------|-------------|---------------------|
| <a href="#">Austin, Webberville Road</a> | Travis | 48-453-0021 | VOCs                |

The TCEQ Monitoring Operations Division reported data for all chemicals evaluated in this memorandum. The data collected for the Webberville Road monitor met the data completeness objective of 75 percent data return, or 45 valid samples per year. Air samples collected over a 24-hour period are designed to provide representative long-term average concentrations. Therefore, the TS evaluated the reported annual average concentrations for each constituent for potential chronic health concerns by comparing measured chemical concentrations to TCEQ long-term, health-based ESLs. Information on the ESLs can be obtained by contacting the TS (512) 239-1795 or visiting the following website: <http://www.tceq.state.tx.us/implementation/tox/esl/ESLMain.html>.

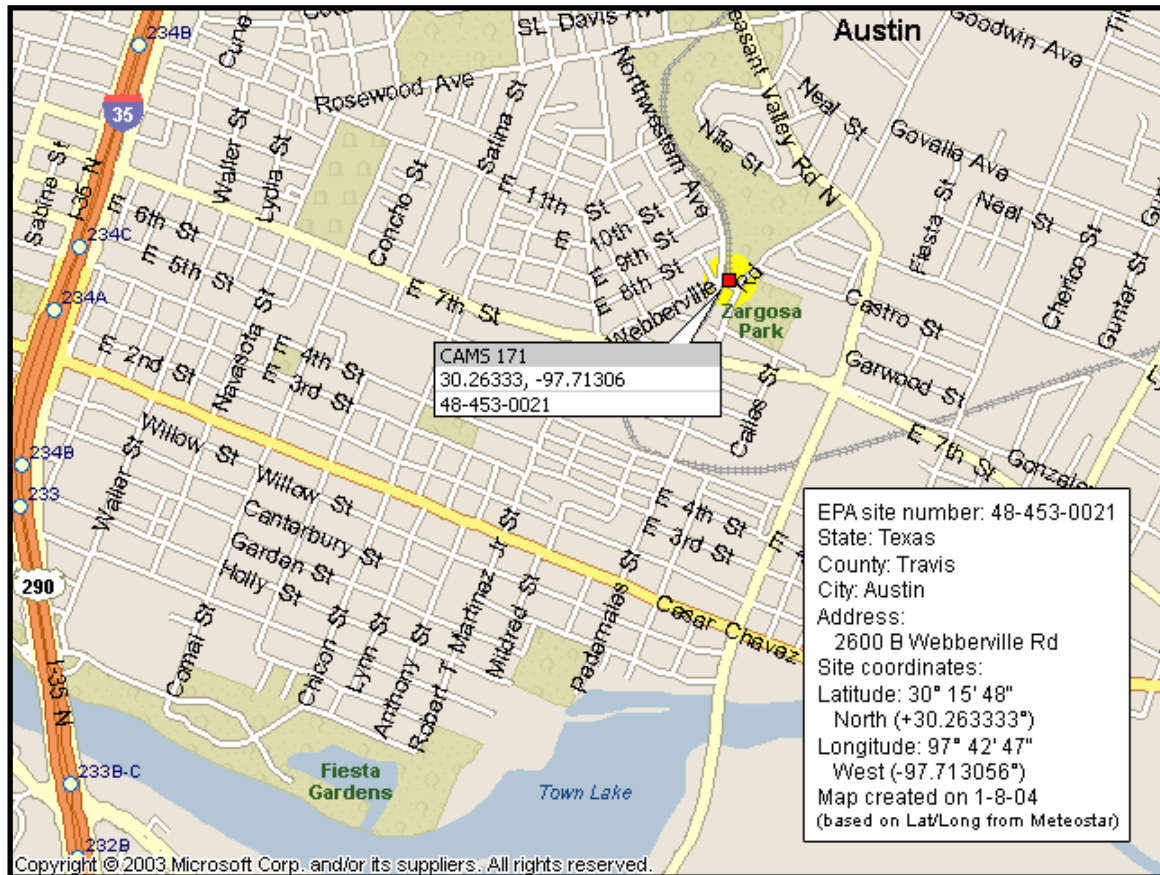
### Evaluation

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Out of 96 VOCs reported for 2005, 58 were not detected. Those that were detected were below their long-term ESLs and would not be expected to cause adverse health effects.

Please contact me at 512-239-1822 or [sethridg@tceq.state.tx.us](mailto:sethridg@tceq.state.tx.us) if you have any questions regarding this memorandum.

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



**Figure 1. Location of Webberville Road Monitor**

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Cc (via email):

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