

## DAVID L. VAUGHN

Group Manager, Air Quality and Exposure Measurements



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### Educational Background

M.S., Plant Sciences, Cornell University  
B.A., Horticulture, Cornell University

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### Professional Experience

Mr. Vaughn joined STI in 2001. He is currently conducting a 14-site evaluation of spatial variability in ambient concentrations of polycyclic aromatic hydrocarbons (PAHs) in Bakersfield, California; is assisting with designing and implementing a U.S. Environmental Protection Agency (EPA)-sponsored pilot study to measure near-roadway concentrations of NO<sub>2</sub> in five U.S. cities; is implementing Phase I of a long-term study of mobile source emissions during pre- and post-highway construction in Salt Lake City, Utah; is managing the design and installation of a new air quality monitoring station for an industrial client in Jamaica; and is completing work on a model standard operating procedure (SOP) for monitoring PM<sub>2.5</sub> with the Thermo Scientific 8500C Filter Dynamics Measurement System (FDMS). He is the project manager for two ambient air quality monitoring sites at the Sunshine Canyon Landfill and the neighboring community of Granada Hills in Los Angeles County, California, for the City of Los Angeles. In 2009 and 2010, he assisted in establishing and operating four near-roadway monitoring sites in a study of road construction PM<sub>2.5</sub>, PM<sub>10</sub>, and mobile source emissions for the Arizona Department of Transportation. Mr. Vaughn also assisted in establishing and operating 10 monitoring sites in a study of near-roadway effects of mobile source air toxics (MSAT) on ambient air quality outside and inside nearby schools in Las Vegas, Nevada, for the Nevada Department of Transportation.

Mr. Vaughn was hired as the Field Manager for the Fresno Asthmatic Children's Environment Study (FACES) sponsored by the California Air Resources Board and the EPA. Mr. Vaughn designed and built the FACES Microenvironmental Monitoring System and was responsible for deploying it in over 100 homes and several schools in the Fresno area from 2002 through 2003.

Mr. Vaughn provided field sampling and data analysis support for a study evaluating ambient carbon monoxide (CO) concentrations and meteorological parameters in Lake Havasu City, Arizona. Based on the results of that study, he managed the design, installation, and operation of a monitoring network to provide real-time ambient CO concentration data and hazard alerts to police and fire department personnel in Lake Havasu City. He continues to provide technical support in the ongoing operation of the CO monitoring and alert system.

Mr. Vaughn assisted in upgrading and testing field measurement equipment used in the Southern California Children's Health Study (CHS). He continues to provide technical field assistance and quality assurance (QA) support for additional PM<sub>2.5</sub> measurements to support the CHS, as well as providing training, QA support, and data management for an intra-community PM variability study in 12 southern California cities. He also managed a field study, including data management and analysis, of PM<sub>10</sub> and PM<sub>2.5</sub> in Marin County, California. From 2004 through 2007, he held the primary responsibility for QA and data validation of speciated PM<sub>2.5</sub> data in an EPA-sponsored study at the Phoenix, Arizona, Supersite. He has contributed to the production of prototype air quality instruments, including a lightweight gas chromatograph for airborne measurements of greenhouse gases, and a military grade, integrated, multi-pollutant measurement system. He also trained clients to evaluate mitigation strategies to control fugitive dust emissions from the high deserts of southern California.