

Journal Articles

- Brown S.G., Frankel A., Raffuse S.M., Roberts P.T., Hafner H.R., and Anderson D.J. (2007) Source apportionment of fine particulate matter in Phoenix, AZ, using positive matrix factorization. *J. Air and Waste Manag. Assoc.* **57**, 741-752 (STI-2675).
- Buzcu-Guven B., Brown S.G., Frankel A., Hafner H.R., and Roberts P.T. (2007) Analysis and apportionment of organic carbon and fine particulate matter sources at multiple sites in the midwestern United States. *J. Air and Waste Manag. Assoc.* **57**, 606-619 (STI-2876).
- Brown S.G., Frankel A., and Hafner H.R. (2007) Source apportionment of VOCs in the Los Angeles area using positive matrix factorization. *Atmos. Environ.* **41**, 227-237 (STI-2725)..
- Lurmann F.W., Brown S.G., McCarthy M.C., and Roberts P.T. (2006) Processes influencing secondary aerosol formation in the San Joaquin Valley during winter. *J. Air & Waste Manag. Assoc.* **56**, 1679-1693 (STI-902331-2661).
- Brown S.G., Roberts P.T., McCarthy M.C., Lurmann F.W., and Hyslop N.P. (2006) Wintertime vertical variations in particulate matter (PM) and precursor concentrations in the San Joaquin Valley during the California Regional Coarse PM/Fine PM Air Quality Study. *J. Air & Waste Manag. Assoc.* **56** (9), 1267-1277 (STI-902326-2659).
- Kim E., Brown S.G., Hafner H.R., and Hopke P.K. (2005) Characterization of non-methane volatile organic compounds sources in Houston during 2001 using positive matrix factorization. *Atmos. Environ.* **39**, 5934-5946.
- Brown S., Herckes P., Ashbaugh L., Hannigan M.P., Kreidenweis S.M., and Collett J.L., Jr. (2002) Characterization of organic aerosol in Big Bend National Park, Texas. *Atmos. Environ.* **36** (38), 5807-5818.

Meeting Presentations and Conference Proceedings

- Roberts P.T., Brown S., DeWinter J., and McCarthy M. (2009) Near-roadway mobile-source air toxics (MSATs) exposures along U.S. 95 in Las Vegas, Nevada. Presented at the ORNL National Transportation Research Center, Oak Ridge, TN. STI 906034-3766, November.
- Hafner H., O'Brien T.E., McCarthy M.C., and Brown S.G. (2009) Prescribed analyses of PAMS data collected from 1994 to 2006. Presented to the San Diego Air Pollution Control District, San Diego, CA, STI-908050-3634, June.
- Brown S.G., Roberts P.T., DeWinter J.L., Vaughn D.L., and McCarthy M.C. (2009) Characteristics of aerosol and MSATs at schools near U.S. 95 in Las Vegas, Nevada. Presented at the *Air and Waste Management Association's 102nd Annual Conference and Exhibition, Detroit, MI, June 16-19* (STI 3520).
- Roberts P.T., Brown S.G., McCarthy M.C., DeWinter J.L., Landreneau J.V., and Vaughn D.L. (2009) Near-roadway pollutant exposures along U.S. 95 in Las Vegas, Nevada. Paper presented at the *US-Korea Conference (UKC2009) on science, technology and entrepreneurship, Raleigh, North Carolina, July 16-19* by Sonoma Technology, Inc., Petaluma, CA (STI-3625).
- Hafner H., O'Brien T.E., and Brown S.G. (2009) SYSTAT: Statistical visualization software. Presented to the San Diego Air Pollution Control District, San Diego, CA, STI-908050-3635, June.

- Roberts P.T., McCarthy M.C., and Brown S.G. (2009) Near-roadway mobile-source air toxics (MSATs) exposures along U.S. 95 in Las Vegas, Nevada. Webinar prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-906034.14-3615, April.
- Brown S.G., Roberts P.T., Vaughn D.L., McCarthy M.C., Lee T., and Collett J.L., Jr. (2008) Characteristics of aerosol at schools near U.S. 95 in Las Vegas, Nevada. Presented at the *AAAR 27th Annual Conference, Orlando, FL, October 23*, by Sonoma Technology, Inc., Petaluma, CA, and Colorado State University, Boulder, CO (STI-3355).
- Wade K.S., Zahn P.H., and Brown S.G. (2008) Application of rotational tools to improve receptor modeling results. Presented at the *AAAR 27th Annual Conference, Orlando, FL, October 23*, by Sonoma Technology, Inc., Petaluma, CA (STI-3353).
- Brown S.G., Roberts P.T., Vaughn D.L., Lee T., and Collett J.L., Jr. (2008) Comparison of near-roadway carbon measurements in winter in Las Vegas, NV. Poster presented at the *9th International Conference on Carbonaceous Particles in the Atmosphere, Berkeley, CA, August 12-14* (STI-3425).
- Wade K.S., Brown S.G., Turner J.R., and Garlock J.L. (2008) Concentration value uncertainty estimates for source apportionment modeling of chemical speciation network data. Presented at the *Air & Waste Management Association's 101st Annual Conference & Exhibition, Portland, OR, June 24-26* (STI3272).
- Roberts P.T., McCarthy M.C., and Brown S.G. (2008) Characteristics of mobile-source air toxics (MSATs) across filtration systems at three schools next to U.S. 95 in Las Vegas, Nevada. Presented at the *Air & Waste Management Association's 101st Annual Conference & Exhibition, Portland, OR, June 25* (STI-906034.14-3273).
- Roberts P.T., McCarthy M.C., and Brown S.G. (2008) Characteristics of mobile-source air toxics (MSATs) at three schools next to U.S. 95 in Las Vegas, Nevada. Presented at the *Air & Waste Management Association's 101st Annual Conference & Exhibition, Portland, OR, June 25* (STI-906034.14-3272).
- Roberts P.T., McCarthy M.C., and Brown S.G. (2008) Lessons learned about mobile source air toxics (MSATs) at three schools next to U.S. 95 in Las Vegas, NV. Presented at the *2008 National Air Quality Conferences, Portland, OR, April 6-9* (STI-3305).
- Wade K.S., Brown S.G., and Hafner H.R. (2007) Combined air toxics and PM_{2.5} component source apportionment for Baltimore. Presented at the *Symposium on Air Quality Measurement Methods and Technology, Air and Waste Management Association, San Francisco, CA, April 30-May 2*, by Sonoma Technology, Inc., Petaluma, CA (STI-3123).
- Brown S.G., Buzcu-Guven B., Frankel A., and Hafner H.R. (2006) Analysis and apportionment of PM_{2.5} and organic carbon in the Upper Midwest. Presented at the *Air & Waste Management Association's 99th Annual Conference & Exhibition, New Orleans, LA, June 20-23* by Sonoma Technology, Inc., Petaluma, CA (STI-2809).
- Reid S.B., Brown S.G., McCarthy M.C., and Chinkin L.R. (2006) Comparison of ambient measurements to emissions representations for modeling in California's San Joaquin Valley. Presented to the *U.S. Environmental Protection Agency's 15th Annual Emission Inventory Conference, New Orleans, LA, May 18*, by Sonoma Technology, Inc., Petaluma, CA (STI-2944).
- Hafner H.R., O'Brien T.E., Frankel A.P., McCarthy M.C., and Brown S.G. (2006) 2005 JATAP monitoring project gaseous air toxics data validation and analysis. Presented at the *JATAP Workshop Meeting, Phoenix, AZ, March 6* by Sonoma Technology, Inc., Petaluma, CA (905039.02-2921).

- Hafner H.R., Penfold B.M., and Brown S.G. (2005) Using GIS tools to select suitable DPM monitoring locations: Phoenix, Arizona. Presented at the *2005 Air Toxics Summit, Seeking Solutions for our Rural and Urban Communities, Portland, OR, October 18-19*, by Sonoma Technology, Inc., Petaluma, CA (STI-904234-2755).
- Brown S.G., Frankel A., Raffuse S.M., Hafner H.R., Roberts P.T., and Anderson B. (2005) Source apportionment of PM_{2.5} at Hercules-Glade, Missouri, using positive matrix factorization. Poster prepared for the *24th Annual American Association for Aerosol Research Conference, Austin, TX, October 17-21*, by Sonoma Technology, Inc., Petaluma, CA, and U.S. Environmental Protection Agency, Region 7 (STI-2739).
- Brown S.G., Penfold B.M., and Hafner H.R. (2005) Selecting monitoring locations using GIS-based spatial analysis techniques. Presented at *Air & Waste Management Association Environmental Data Analysis: Assessing Health and Environmental Impacts, Oak Brook, IL, October 4* by Sonoma Technology, Inc., Petaluma, CA (STI-2711).
- Raffuse S.M., Brown S.G., Sullivan D.C., and Chinkin L.R. (2005) Estimating regional contributions to atmospheric haze. Presented at the *2005 ESRI International User Conference, San Diego, CA, July 26* (STI-2649).
- Brown S.G. and Hafner H.R. (2005) Source apportionment using positive matrix factorization of VOCs at a heavily industrialized site in Houston, Texas. Presentation at the *AWMA Annual Conference, Minneapolis, MN, June 23* (STI-900700-2609).
- Brown S.G. and Hafner H.R. (2005) Using VOCDat to validate and process air toxics data. Presentation to the *U.S. Environmental Protection Agency's 15th Annual National Air Quality Systems Conference, San Diego, CA, June 13-17* (STI-905102.08-2752).
- Hafner H.R. and Brown S.G. (2005) Receptor modeling overview. Presentation at the *AWMA Symposium on Air Quality Measurement Methods and Technology, San Francisco, CA, April 19-21* (STI-2734).
- Brown S.G., McCarthy M.C., Raffuse S.M., and Hafner H.R. (2005) Assessment of ozone and PM_{2.5} exceedances on a national scale. Presentation at the *U.S. Environmental Protection Agency's 2005 National Air Quality Conference: Quality of Air Means Quality of Life, San Francisco, CA, February 12-13* (STI-2647).
- Hafner H.R., Penfold B.M., and Brown S.G. (2005) Using spatial analysis techniques to select monitoring locations. Presentation at the *U.S. Environmental Protection Agency's 2005 National Air Quality Conference: Quality of Air Means Quality of Life, San Francisco, CA, February 12-13* (STI-2645).
- Brown S.G., Reid S.B., Sullivan D.C., and Hafner H.R. (2005) Development of GIS emissions analysis tools to estimate the probability of regional source contributions. Presented at the *2005 Particulate Matter Supersites Program and Related Studies: An AAAR International Specialty Conference, Atlanta, GA, February 7-11* (STI-2694).
- Brown S.G., Frankel A., Hafner H.R., Roberts P.T., and Anderson D.A. (2005) Source apportionment of PM_{2.5} in Phoenix, Arizona, with Positive Matrix Factorization. Poster prepared for the *2005 Particulate Matter Supersites Program and Related Studies: An AAAR International Specialty Conference, February 7-11, Atlanta, GA* (STI-2687).
- Brown S.G., Roberts P.T., and Hyslop N.P. (2004) Wintertime vertical variations in particulate matter and precursor concentrations in the San Joaquin Valley during the California Regional PM₁₀/PM_{2.5} Air Quality Study. Presented at *Regional and Global Perspectives on Haze: Causes, Consequences and Controversies - Visibility Specialty Conference, Asheville, NC, October 25-29* by Sonoma Technology, Inc., Petaluma, CA (STI-2513).

- Hafner H.R., Brown S.G., and Anderson D. (2004) Source apportionment of PM_{2.5} in Phoenix, Arizona using positive matrix factorization. Presented at *Regional and Global Perspectives on Haze: Causes, Consequences and Controversies - Visibility Specialty Conference, Asheville, NC, October 25-29* by Sonoma Technology, Inc., Petaluma, CA (STI-2512).
- Brown S.G. and Hafner H.R. (2004) Source apportionment of VOCs in the Houston, Texas, area using Positive Matrix Factorization. Paper no. 353 presented at the *Air and Waste Management Association's 97th Annual Conference and Exhibition, Indianapolis, IN, June 22-25* (STI-2415).
- Hafner H.R., Brown S.G., McCarthy M.C., Arkinson H.L., and Sullivan D.C. (2004) Validation and Preliminary Analysis of JATAP Air Toxics Data. Presentation to the Arizona Department of Environmental Quality, Phoenix, AZ, June 11 by Sonoma Technology, Inc., Petaluma, CA, STI-903774-2564.
- Reid S.B., Funk T.H., Sullivan D.C., Stiefer P.S., Arkinson H.L., Brown S.G., and Chinkin L.R. (2004) Research and development of emission inventories for planned burning activities for the Central States Regional Air Planning Association. Paper for the *13th International Emission Inventory Conference "Working for Clean Air in Clearwater", Clearwater, FL, June 8-10* (STI-2515).
- Brown S.G., Reid S.B., Roberts P.T., Buhr M.P., Funk T.H., Kim E., and Hopke P.K. (2004) Reconciliation of the VOC and NO_x emission inventory with ambient data in the Houston, Texas region. Paper presented at the *U.S. Environmental Protection Agency's 13th Annual Emission Inventory Conference, Clearwater, FL, June 9* (STI-2525).
- Hafner H.R., McCarthy M.C., Brown S.G., Raffuse S.M., Shields E., Stiefer P.S., and Wheeler N.J. (2004) Workshop on air toxics data analysis. *Prepared for Lake Michigan Air Directors Consortium; presented in Rosemont, IL, June 2-3* (STI-903555).
- Brown S.G., Hafner H.R., and Shields E. (2004) Source apportionment of Detroit air toxics data with positive matrix factorization. Paper no. 41 presented at the *Air and Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Research Triangle Park, NC, April 19-22* (STI-2450).
- Hafner H.R., Brown S.G., and McCarthy M.C. (2004) An approach to data validation of air toxics data. Paper no. 34 presented at the *Air and Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Research Triangle Park, NC, April 19-22* (STI-2443).
- Hafner H.R., Brown S.G., Penfold B.M., and Funk T.H. (2004) Use of GIS tool to investigate suitable diesel emissions monitoring locations in Detroit, Michigan. Paper no. 35 presented at the *Air and Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Research Triangle Park, NC, April 19-22* (STI-2444).
- Brown S.G., Hyslop N.P., Simon E.M., Shields E., and Roberts P.T. (2004) Task 2.5: vertical variations in PM and PM precursor concentrations in the San Joaquin Valley. Presented to *California Regional PM₁₀/PM_{2.5} Air Quality Study (CRPAQS) Data Analysis Workshop, Sacramento, CA, March 9-10*, by Sonoma Technology, Inc., Petaluma, CA (STI-902326-2498).
- Brown S.G. and Hafner H.R. (2003) Source apportionment of VOCs in the Houston, Texas, area. Presented at the *NARSTO Workshop on Innovative Methods for Emission-Inventory Development and Evaluation, Austin, TX, October 14-16* (STI-2356).
- Brown S.G., Hafner H.R., and Ryan P.A. (2003) Nitrogen deposition into the Casco Bay Estuary, Maine. Paper and presentation prepared for the *Air and Waste Management Association's 96th Annual Conference and Exhibition, San Diego, CA, June 22-26, 2003* (STI-2327).

- Hafner H.R. and Brown S.G. (2003) Investigating the effect of selected control strategies on ambient hydrocarbon data in the northeastern and mid-Atlantic United States: 1994-2001 trends. Paper and presentation prepared for the *Air and Waste Management Association's 96th Annual Conference and Exhibition, San Diego, CA, June 22-26* (STI 2250).
- Brown S.G. and Hafner H.R. (2003) Source apportionment of Detroit pilot city air toxics data. Presented at the *National Workshop on Air Toxics Monitoring, Chicago, IL, May 13-14* (STI-902530-2371).
- Brown S.G., Knoderer C.A., and Hafner H.R. (2003) Meteorological effects on air toxics concentrations in Detroit. Presented at the *National Workshop on Air Toxics Monitoring, Chicago, IL, May 13-14* (STI-902530-2370).
- Hafner H.R. and Brown S.G. (2003) Assessment of elemental carbon and its relationship with diesel particulate matter. Presented at the *National Workshop on Air Toxics Monitoring, Chicago, IL, May 13-14* (STI-902530-2369).
- Hafner H.R., Brown S.G., Penfold B.M., and Funk T.H. (2003) Suitability analysis for monitoring diesel particulate matter in the Detroit area. Presented at the *National Workshop on Air Toxics Monitoring, Chicago, IL, May 13-14* (STI-902530-2372).
- Brown S.G., Roberts P.T., Buhr M.P., Wheeler N.J.M., and Roney J.A. (2002) Characterization of ozone event-triggered VOC and carbonyl samples in Houston, Texas, in 2001. Presented at the *Symposium on Air Quality Measurement Methods and Technology, San Francisco, CA, November 14* (STI-900680-2234).
- Brown S.G. and Hafner H.R. (2002) Analysis of volatile organic compounds and their impact on ozone formation in the Houston area. Presented at the *Symposium on Air Quality Measurements Methods and Technology, San Francisco, CA, November 14* (STI-900670-2233).
- Brown S.G., Main H.H., and Ryan P.A. (2002) Mercury deposition into the Casco Bay Estuary, Maine. Presented at the *National Atmospheric Deposition Program (NADP) Scientific Symposium, Seattle, WA, September 11* (STI-2248).
- Main H.H. and Brown S.G. (2002) Acquisition, review and analysis of auto-GC data in the Houston area. Presented to Texas Natural Conservation Commission, Austin, TX, August 28 (STI-900670-2260).
- Roberts P.T., Brown S.G., Main H.H., Buhr M.P., Hyslop N.P., MacDonald C.P., Roney J., Knoderer C.A., and Miller D. (2002) Preliminary VOC, olefin, and conceptual model results for Houston. Presented to Texas Natural Resource Conservation Commission, Austin, TX, April 4.
- Collett J.L. Jr., Lee T., Sherman D.E., Reilly J.E., Brown S.G., and Kreidenweis S.M. (2001) The composition of aerosol sampled at Big Bend National Park during the 1999 Big Bend Regional Aerosol and Visibility Observational study (BRAVO). Presented at the *Air and Waste Management Association Conference, Bend, OR, October 2-5*.
- Herckes P., Brown S., Lee T., Hannigan M.P., Kreidenweis S.M., and Collett J.L. Jr. (2001) Molecular composition of organic aerosol sampled at Big Bend National Park, Texas during the 1999 Big Bend Regional Aerosol and Visibility Observational (BRAVO) study. Presented at the *Air and Waste Management Association Conference, Bend, OR, October 2-5*.
- Herckes P., Brown S., Lee T., Hannigan M.P., Kreidenweis S.M., and Collett J.L. Jr. (2001) Molecular composition of organic aerosol sampled at Big Bend National Park, Texas during the 1999 Big Bend Regional Aerosol and Visibility Observational (BRAVO) study. Presented at the *20th Annual American Association for Aerosol Research Conference, Portland, OR, October 15-19*.

Brown S.G., Sherman D.E., Hand J.L., Lee T., Kreidenweis S.M., and Collett J.L. Jr. (2000) Aethalometer measurements of sub- and super-micron black carbon during the BRAVO study. Presented at the *19th Annual American Association for Aerosol Research Conference, St. Louis, MO, November 6-11.*

Thesis

Brown S.G. (2001) Characterization of carbonaceous aerosol during the Big Bend Regional Aerosol and Visibility Observational Study, M.S. Thesis, Colorado State University.

Formal Reports

Roberts P.T., Brown S.G., McCarthy M.C., DeWinter J.L., Landreneau J.V., and Vaughn D.L. (2009) Mobile source air toxics (MSATs) at three schools next to U.S. 95 in Las Vegas, Nevada. Draft final report prepared for the Nevada Department of Transportation, Las Vegas, NV, by Sonoma Technology, Inc., Petaluma, CA, STI-906034-3509-DFR, November.

DeWinter J.L., McCarthy M.C., Brown S.G., Shiffrin J.P., and Hafner H.R. (2009) Atmospheric nitrogen deposition on Wampanoag tribal lands. Draft final report prepared for the Wampanoag Tribe of Gay Head (Aquinnah), Aquinnah, MA, prepared by Sonoma Technology, Inc., Petaluma, CA, STI-909015-3706-DFR, September.

O'Brien T.E., Brown S.G., McCarthy M.C., and Hafner H. (2009) Prescribed analyses of San Diego photochemical assessment monitoring station (PAMS) hydrocarbon data collected from 1994 to 2006. Prepared for the San Diego Air Pollution Control District, San Diego, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-908050-3621-FR, June.

MacDonald C.P., Craig K.J., DeWinter J.L., Pasch A.N., Brown S.G., and Wheeler N.J.M. (2009) Evaluation of Sacramento Metropolitan Air Quality Management District's Check Before You Burn Program. Final report prepared for the Sacramento Metropolitan Air Quality Management District, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-909014.06-3612-FR2, August.

Charrier J.G., Hafner H.R., Wade K.S., Brown S.G., and MacDonald C.P. (2009) California ambient dioxin air monitoring program 2002 to 2006 data analysis of dioxins, furans, biphenyls, and diphenylethers. Final report prepared for the California Air Resources Board, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-907024.05-3292-FR, February.

Brown S.G., Hafner H.R., and Wade K.S. (2008) Multivariate receptor modeling workbook. Prepared for the U.S. Environmental Protection Agency, Office of Research and Development, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-908027-3401, October.

Norris G., Vedantham R., Wade K.S., Brown S.G., Prouty J.D., and Foley C. (2008) EPA positive matrix factorization (PMF) 3.0 fundamentals and user guide. Prepared for the U.S. Environmental Protection Agency, Washington, D.C., by the National Exposure Research Laboratory, Research Triangle Park, Sonoma Technology, Inc., Petaluma, CA, and Lockheed Martin Systems Engineering Center, Arlington, VA., EP-D-05-004; STI-907045.05-3347-UG, October.

Reid S.B., Chinkin L.R., McCarthy M.C., Raffuse S.M., and Brown S.G. (2008) A comparison of ambient measurements to emissions representations for modeling to support the Central California Ozone Study

(CCOS). Final report prepared for the California Air Resources Board, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-905044.13-3144-FR, October.

Brown S.G., Funk T.H., Charrier J., Gilliland E.K., Hafner H.R., and Reid S.B. (2008) Phase II source apportionment findings (extension to the CCOS project "Comparison of ambient measurements to emissions representations for modeling"). Technical memorandum prepared for the California Air Resources Board, Sacramento, CA by Sonoma Technology, Inc., Petaluma, CA, STI-905044.14-3396-TM, June 30.

Reid S.B., Sullivan D.C., and Gilliland E.K. (2008) Area source emission inventory assessment. Final Report prepared for the Central Regional Air Planning Association, Oklahoma City, OK by Sonoma Technology, Inc., Petaluma, CA, STI-908018.05-3385-FR, June.

Brown S.G. (2008) Quality assurance project plan: Ambient air quality monitoring project, version 1.0. QAPP submitted to the Louisiana Department of Environmental Quality, Baton Rouge, LA, by Eagle Environmental Services, Inc., Baton Rouge, LA, and Sonoma Technology, Inc., Petaluma, CA, 908028.02-3351, May.

Wade K.S., Turner J.R., Brown S.G., Garlock J.L., and Hafner H.R. (2008) Data analysis and source apportionment of PM_{2.5} in selected midwestern cities. Final report prepared for the Lake Michigan Air Directors Consortium, Rosemont, IL, by Sonoma Technology, Inc., Petaluma, CA, and Washington University, St. Louis, MO, STI-907018.03-3264-FR, April.

Rubin J.I., Brown S.G., and Roberts P.T. (2007) Phoenix JLG Supersite PAMS VOC data quality summary for summer 2007. Final summary report prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-90016.08-3257, November.

Rubin J.I., Brown S.G., and Roberts P.T. (2007) Automated gas chromatography for PAMS VOC monitoring at the Phoenix JLG Supersite. Standard operating procedure prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-907016.07-3258-SOP, October.

Brown S.G., Wade K.S., and Hafner H.R. (2007) Multivariate receptor modeling workbook. Prepared for the U.S. Environmental Protection Agency, Office of Research and Development, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-906207.01-3216, August.

Rubin J.I., Brown S.G., Wade K.S., and Hafner H.R. (2006) Apportionment of PM_{2.5} and air toxics in Detroit, Michigan. Final report prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-906201.06-3103-FR, December.

Wade K.S., Brown S.G., Raffuse S.M., and Hafner H.R. (2006) Assessment of wood smoke air pollution. Literature review and case study analysis prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-906204-3104, December.

Wade K.S., Brown S.G., and Roberts P.T. (2006) Characterization of ambient air quality in the Oil Sands area of northern Alberta. Final report prepared for the Trace Metals and Air Contaminants Group, Edmonton, Alberta, Canada by Sonoma Technology, Inc., Petaluma, CA, STI-906039-3070-FR, December.

- Turner J., Wade K.S., and Brown S.G. (2006) Quality assurance audit – Control strategy framework evaluations. Final report prepared for The Central States Air Resource Agencies and The Central Regional Air Planning Association, Oklahoma City, OK, by Sonoma Technology, Inc, Petaluma, CA, STI-905045.03-2988-FR, June.
- Brown S.G., Hafner H.R., Roberts P.T., Sheesley R.J., and Schauer J.J. (2006) Integration of results for the Upper Midwest Urban Organics Study. Final report prepared for the Lake Michigan Air Directors Consortium, Des Plaines, IL, by Sonoma Technology, Inc., Petaluma, CA, and the University of Wisconsin, Madison, WI, STI-903520-2942-FR, March.
- Brown S.G., Hafner H.R., Roberts P.T., Sheesley R.J., and Schauer J.J. (2006) Midwest Urban Organics Study: lessons learned. Prepared for the Lake Michigan Air Directors Consortium, Des Plaines, IL, by Sonoma Technology, Inc., Petaluma, CA, and the University of Wisconsin, Madison, WI, STI-903520-2945, March.
- Wu J., Brown S., and Hafner H. (2005) Casco Bay trace metal validation and preliminary analysis. Presentation prepared for the U.S. Environmental Protection Agency, Region 1, North Chelmsford, MA, by Sonoma Technology, Inc., Petaluma, CA, STI-904080.03-2883, December.
- Brown S.G. and Hafner H.R. (2005) Multivariate receptor modeling workbook. Workbook prepared for the U.S. Environmental Protection Agency, Office of Research and Development, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-905103-2789, September.
- Brown S.G. and Roberts P.T. (2005) Shipping study data analysis. Final report prepared for the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Petaluma, CA, STI-905104.03-2808, September.
- Chinkin L.R., Penfold B.M., Brown S.G., and Hafner H.R. (2005) Emission inventory evaluation and reconciliation in the South Coast Air Basin. Final report prepared for South Coast Air Quality Management District, Diamond Bar, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-904045-2728-FR, August.
- Sullivan D.C., Hafner H.R., Brown S.G., MacDonald C.P., Raffuse S.M., Penfold B.M., and Roberts P.T. (2005) Analyses of the causes of haze for the Central States (Phase II) Summary of findings. Executive summary prepared for the Central States Regional Air Planning Association by Sonoma Technology, Inc., Petaluma, CA, STI-904780.08-2754-ES, August.
- McCarthy M.C., Hafner H.R., Brown S.G., Lurmann F.W., and Roberts P.T. (2005) Background and boundary conditions for particulate matter and precursors in the San Joaquin Valley in winter. Technical memorandum prepared for the California Air Resources Board, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-902325-2779-TM, July.
- Brown S.G., Vaughn D.L., Raffuse S.M., and Roberts P.T. (2005) Validation guidelines for and analyses of Aethalometer™ black carbon data collected at the Phoenix supersite from October 2003 through March 2005. Executive summary prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-905020.02-2768-ES, June.

- Brown S.G., Frankel A., and Hafner H.R. (2005) Principal component analysis and source apportionment of PAMS VOC data. Final report prepared for the South Coast Air Quality Management District, Diamond Bar, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-904046-2723-FR, July.
- Brown S.G., Vaughn D.L., Raffuse S.M., Frankel A., Hafner H.R., and Roberts P.T. (2005) Analysis and comparison of Aethalometer black carbon with multiple thermal measurements of elemental carbon in Phoenix, Arizona. Technical memorandum prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-905020.02-2767-TM, June.
- Vaughn D.L., Brown S.G., and Roberts P.T. (2005) Validation procedures for the AE21 series Aethalometer™. Final report prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-905020.01-2763-FR, June.
- Brown S.G., McCarthy M.C., Hafner H.R., and Frankel A. (2005) Analyses of Gila River air toxics data collected from 2003 through 2004. Final report prepared for the Gila River Indian Community Department of Environmental Quality, Sacaton, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-905002-2750-FR, May.
- Tamura T.M., Hafner H.R., Brown S.G., and Eisinger D.S. (2005) Investigation of consistency between ambient monitoring data and MOBILE6.2 emissions predictions for air toxics. Final report prepared for the Federal Highway Administration, Washington, DC, by Sonoma Technology, Inc., Petaluma, CA, STI-903632-2621-FR, March.
- Sullivan D.C., Reid S.B., Penfold B.M., and Raffuse S.M. (2004) An emission inventory of toxic air pollutants for South Phoenix and recommendations for further inventory development. Final report prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903773-2670-FR, December.
- McCarthy M.C., Brown S.G., Hafner H.R., Frankel A., and Broaders K.E. (2004) Data analyses for Phoenix, Arizona, air toxics data collected from 2001 to 2004. Final report prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-904236-2666FR, December.
- McCarthy M.C., Brown S.G., Frankel A., and Hafner H.R. (2004) Data analysis for air toxics collected at JATAP sites from 2001 to 2004: Task 2 results. Final report prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903772-2620-FR, November.
- McCarthy M.C., Brown S.G., Hafner H.R., and Frankel A. (2004) Data analyses for Gila River air toxics collected from 2003 to 2004. Final report prepared for Gila River Indian Community Department of Environmental Quality, Sacaton, AZ, by Sonoma Technology, Inc., Petaluma, CA, 904063-2608-FR, September.
- McCarthy M.C., Brown S.G., Hafner H.R., and Shields E. (2004) Prescribed data analysis for Phoenix, Arizona, hydrocarbon data collected in 2002 and 2003. Final report prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903701-2600-FR, September.

- Brown S.G. and Hafner H.R. (2004) Data validation of Gila River March 2003 to March 2004 toxics data as part of JATAP Small Area Monitoring Project. Technical memorandum prepared for Gila River Indian Community, Department of Environmental Quality, Sacaton, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-904061-2596, August.
- McCarthy M.C., Hafner H.R., and Brown S.G. (2004) Data validation of Phoenix Supersite and Queen Valley 2001-2004 toxics data (Purchase Order Number EV04-0055). Technical memorandum prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-904232-2586, July.
- Reid S.B., Brown S.G., Sullivan D.C., Arkinson H.L., Funk T.H., and Stiefer P.S. (2004) Research and development of planned burning emission inventories for the Central States Regional Air Planning Association. Final report prepared for The Central States Air Resource Agencies and The Central Regional Air Planning Association, Oklahoma City, OK, by Sonoma Technology, Inc., Petaluma, CA, STI-902514-2516-FR, July.
- Miller D.S. and Brown S.G. (2004) San Diego PM_{2.5} and PM₁₀ forecasting tool development database contents. Database document prepared for the San Diego Air Pollution Control District, San Diego, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-903530-2571-DD, June.
- Miller D.S. and Brown S.G. (2004) San Diego PM_{2.5} and PM₁₀ forecasting tool development. Final report prepared for the San Diego Air Pollution Control District, San Diego, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-903530-2562-FR, June.
- Roberts P.T., Brown S.G., Reid S.B., Buhr M.P., Funk T.H., Stiefer P.S., Hopke P.K., and Kim E. (2004) Emission inventory evaluation and reconciliation in the Houston-Galveston area. Final report prepared for the Houston Advanced Research Center, Texas Environmental Research Consortium, The Woodlands, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-903640-2490-FR2, June.
- Simon E.M., Brown S.G., and Hafner H.R. (2004) Processing Arizona Department of Environmental Quality Air Toxics Data Supplied by Eastern Research Group. Standard Operating Procedure prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903703-2535-SOP, May.
- Hafner H.R., McCarthy M.C., Brown S.G., Roberts P.T., and Koerber M. (2004) Policy-relevant lessons learned from Phase I/II air toxics analyses. White paper prepared for the Lake Michigan Air Directors Consortium, Des Plaines, IL, by Sonoma Technology, Inc., Petaluma, CA, and Lake Michigan Air Directors Consortium, Des Plaines, IL, STI-903553-2479-WP2, April.
- Brown S.G., Simon E.M., and Hafner H.R. (2004) Assessment of PM_{2.5} speciation data validation tool and procedures. Technical memorandum prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903177, January.
- Hafner H.R., Brown S.G., Simon E.M., Knoderer C.A., and Hyslop N.P. (2004) Arizona PM network assessment. Technical memorandum prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903173, January.

- Brown S.G. and Dye T.S. (2003) PM_{2.5} forecasting - statistical forecasting tool. Technical memorandum prepared for the Lake Michigan Air Directors Consortium, Des Plaines, IL, by Sonoma Technology, Inc., Petaluma, CA, STI-903480-2433-TM, December.
- Hafner H.R., Brown S.G., Tamura T.M., Arkinson H.L., and Penfold B.M. (2003) Site selection, data acquisition, data validation, and MOBILE6 sensitivity. Technical memoranda prepared for the Federal Highway Administration, Washington, DC, by Sonoma Technology, Inc., Petaluma, CA, STI-903631-2454, December.
- Battelle Memorial Institute and Sonoma Technology, Inc. (2003) Phase II air toxics monitoring data: analyses and network design recommendations. Final technical report prepared for Lake Michigan Air Directors Consortium, Des Plaines, IL by Battelle Memorial Institute, Columbus, OH, and Sonoma Technology, Inc., Petaluma, CA, December.
- Brown S.G. and Dye T.S. (2003) PM_{2.5} forecasting - synoptic typing. Technical memorandum prepared for Lake Michigan Air Directors Consortium, Des Plaines, IL, by Sonoma Technology, Inc., Petaluma, CA, STI 903480-2414-TM, September.
- Hafner H.R., Brown S.G., Simon E.M., Knoderer C.A., and Hyslop N.P. (2003) Arizona PM network assessment. Technical memorandum prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903176-2416-TM, July.
- Hafner H.R., Brown S.G., and Simon E.M. (2003) Comparison of collocated PM₁₀ mass, PM_{2.5} mass, and PM_{2.5} speciation measurements at the Phoenix Supersite. Technical memorandum prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903172-2397, July.
- Ryan P.A., Hafner H.R., and Brown S.G. (2003) Deposition of air pollutants to Casco Bay. Final report prepared for Casco Bay Estuary Project, University of Southern Maine, Portland, ME, by Sonoma Technology, Inc., Petaluma, CA, STI-902150-2209-FR2, July.
- Brown S.G., Simon E.M., O'Brien T.E., and Hafner H.R. (2003) Assessment of PM_{2.5} speciation data validation tool and procedures. Technical memorandum prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-903177, June.
- Brown S.G. and Hafner H.R. (2003) Exploratory source apportionment of Houston's Clinton Drive auto-GC 1998-2001 data. Final report prepared for Texas Commission on Environmental Quality, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, 900700-2317-FR, May.
- Hafner H.R., Brown S.G., Penfold B.M., and Funk T.H. (2003) Designing a monitoring regimen for air toxics from landfills. Final report prepared for Massachusetts Department of Environmental Protection, Boston, MA, by Sonoma Technology, Inc., Petaluma, CA, STI-902133-2335-FR, March.
- Hyslop N.P., Brown S.G., Gorin C.A., and Hafner H.R. (2003) California Regional PM₁₀/PM_{2.5} Air Quality Study (CRPAQS) data quality summary reports. Final report prepared for San Joaquin Valleywide Air Pollution Study Agency c/o California Air Resources Board, Sacramento, CA, by Sonoma Technology, Inc., Petaluma, CA, STI-999242-2310-FR, February.

- Hafner H.R. and Brown S.G. (2003) Review of Detroit DRUM impactor data. Technical memorandum prepared for the Lake Michigan Air Directors Consortium, Des Plaines, IL, by Sonoma Technology, Inc., Petaluma, CA, STI-902910, February.
- Brown S.G. and Hafner H.R. (2003) Prescribed data analyses for Phoenix, Arizona, hydrocarbon data collected in 2001. Final report prepared for Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, CA, STI-902263-2285-FR, January.
- Hyslop N.P. and Brown S.G. (2002) Quality assurance program plan. Prepared for the Arizona Department of Environmental Quality, Phoenix, AZ, by Sonoma Technology, Inc., Petaluma, California, STI-901485-2256-QAPP, September.
- Main H.H. and Brown S.G. (2002) PAMS data validation for the northeast states 2000-2001. Report prepared for Northeast States for Coordinated Air Use Management, Boston, MA, by Sonoma Technology, Inc., Petaluma, CA, STI-902071-2205-FR, September.
- Roberts P.T., Hyslop N.P., and Brown S.G. (2002) VOC data collected at four sites in Houston, Texas, during summer and fall 2001. Report prepared for the U.S. Environmental Protection Agency, Region 6, Dallas, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-901340-2238-DR, August.
- Brown S.G., Roberts P.T., Buhr M.P., and Wheeler N.J.M. (2002) Characterization of 2001 event-triggered VOC and carbonyl compound samples. Prepared for the Texas Natural Resource Conservation Commission, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, STI 900680-2188-FR, August.
- Brown S.G. and Hafner H.R. (2002) Prescribed data analyses for Massachusetts PAMS sites. Technical memorandum prepared for Department of Environmental Protection, Lawrence, MA, by Sonoma Technology, Inc., Petaluma, CA, STI-902133-2263-TM, October.
- Brown S.G. and Hafner H.R. (2002) Emissions of toxic VOCs from landfills: literature review. Technical memorandum prepared for Commonwealth of Massachusetts, Department of Environmental Protection, Lawrence, MA, by Sonoma Technology, Inc., Petaluma, CA, STI-902132-2216-TM, July.
- Brown S.G. and Main H.H. (2002) Validation of Massachusetts hazardous air pollutant data. Technical memorandum prepared for the Commonwealth of Massachusetts Department of Environmental Protection, Lawrence, MA, by Sonoma Technology, Inc., Petaluma, CA, STI-902131-2218-TM, July.
- Brown S.G. and Main H.H. (2002) Acquisition, review, and analysis of auto-GC VOC data in the Houston area, 1998-2001. Prepared for Texas Natural Resource Conservation Commission, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-900670-2224-FR, July.
- Brown S.G., Main H.H., and Roberts P.T. (2002) Preliminary results of total hydrocarbon and NO_x analysis at the San Jacinto Monument site (Houston, Texas) August 15 to October 24, 2001. Interim report prepared for Texas Natural Resources Conservation Commission, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-901350-2168-IR, April.
- Main H.H. and Brown S.G. (2002) Validation and analysis of Atlanta, Georgia 1999 and 2000 PAMS data. Technical memorandum prepared for the Georgia Department of Natural Resources, Atlanta, GA, by Sonoma Technology, Inc., Petaluma, CA, STI-999434-2177-TM, March.

- Main H.H. and Brown S.G. (2002) Preliminary analyses of Houston auto-GC 1998-2001 data: episode/non-episode differences. Interim report prepared for Texas Natural Resource Conservation Commission, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-900670-2165-IR, March.
- Main H.H. and Brown S.G. (2002) Summary of data validation of 2001 auto-GC data. Interim report prepared for Texas Natural Resource Conservation Commission, Austin, TX, by Sonoma Technology, Inc., Petaluma, CA, STI-900670-2163-IR, March.
- Brown S.G., Herckes P., Kreidenweis S.M., and Collett J.L., Jr. (2001) Characterization of carbonaceous aerosol during the Big Bend Regional Aerosol and Visibility Observational study. CIRA technical paper No. 0737-5352-54, December.