

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).
- McCarthy M.C., Hafner H.R., Chinkin L.R., and Charrier J.G. (2007) Temporal variability of selected air toxics in the United States. *Atmos. Environ.*, doi:10.1016/j.atmosenv.2007.1005.1037 (STI-2894).
- MacDonald C.P., McCarthy M.C., Dye T.S., Wheeler N.J.M., Hafner H.R., and Roberts P.T. (2006) Transport and dispersion during wintertime particulate matter episodes in the San Joaquin Valley, California. *J. Air & Waste Manag. Assoc.* **56**, 961-976 (STI-902329-2660).
- McCarthy M.C., Hafner H.R., and Montzka S.A. (2006) Background concentrations of 18 air toxics for North America. *J. Air & Waste Manag. Assoc.* **56**, 3-11 (STI-903550-2589).
- McCarthy M.C., Eisinger D.S., Hafner H.R., Chinkin L.R., Roberts P.T., Black K.N., Clark N.N., McMurry P.H., and Winer A.M. (2006) Particulate matter: a strategic vision for transportation-related research. *Environ. Sci. Technol.* **40** (18), 5593-5599 (STI-904750-2843). Available on the Internet at <<http://pubs.acs.org/doi/abs/10.1021/es062767i>>.
- Kenski D., Koerber M., Hafner H.R., McCarthy M.C., and Wheeler N. (2005) Lessons learned from air toxics data: a national perspective. *Environ. Man. J.*, 19-22.
- 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.
- Chinkin L.R., Coe D.L., Funk T.H., Hafner H.R., Roberts P.T., Ryan P.A., and Lawson D.R. (2003) Weekday versus weekend emissions activity patterns for ozone precursor emissions in California's South Coast Air Basin. *J. Air & Waste Manag. Assoc.* **53**, 829-843 (STI-999679-2225).
- MacDonald C.P., Roberts P.T., Main H.H., Dye T.S., Coe D.L., and Yarbrough J. (2001) The 1996 Paso del Norte Ozone Study: phenomena that influence the local ozone concentrations. *Sci. Total Environ.* (Special Issue: U.S.-Mexico Transboundary Air Pollution Studies) **276**, Nos. 1-3, 93-110 (STI-1949).
- Seila R.L., Main H.H., Arriaga J.L., Martinez G.V., and Ramadan A.B. (2001) Atmospheric volatile organic compound measurements during the 1996 Paso Del Norte study. *Sci. Total Environ.* **276**, 153-169.
- Lyons J.M., Venkataraman C., Main H.H., and Friedlander S.K. (1993) Size distributions of trace metals in the Los Angeles atmosphere. *Atmos Environ.* **27B**, 237-249.
- Fujita E.M., Croes B.E., Bennett C.L., Lawson D.R., Lurmann F.W., and Main H.H. (1992) Comparison of emission inventory and ambient concentration ratios of CO, NMOG, and NO_x in California's South Coast Air Basin. *J. Air & Waste Manag. Assoc.* **42**, 264-276.
- Main H.H. and Friedlander S.K. (1990) Dry deposition of atmospheric aerosols by dual tracer method, part I. point source. *Atmos. Environ.* **24A**, 103-108.

Meeting Presentations and Conference Proceedings

- McCarthy M., Hafner H., Simpson J., and Fauci M. (2009) Air toxics around a pulp and paper mill. Presentation at the *2009 National Ambient Air Monitoring Conference, Nashville, TN, November 2-5*, by Sonoma Technology, Inc., Petaluma, CA, and the Nez Perce Tribe's Environmental Restoration and Waste Management Division, Air Quality Program, Lapwai, ID (STI-3682).
- Hafner H. (2009) Data validation overview. Presented at the *2009 National Ambient Air Monitoring Conference, Nashville, TN, November 2-5* by Sonoma Technology, Inc., Petaluma CA (STI-620000-3726).
- McCarthy M. and Hafner H. (2009) Lessons learned from U.S. air toxics data analysis. Presented at the *ZoneVolution Conference, Edmonton, Alberta, Canada, October 20*, by Sonoma Technology, Inc., Petaluma CA (STI-620000-3735).
- Huang S. and Hafner H. (2009) Exceptional event case study: Region 9, PM₁₀ events, Arizona. Presented to EPA Region 9 and EPA OAQPS, July 7 (STI 905512-3662).
- Wade K. and Hafner H. (2009) Air quality management support. Presented to U.S. Environmental Protection Agency and North Carolina Department of Environmental Quality, Division of Air Quality, Raleigh, NC, by Sonoma Technology, Inc., STI-905515-3656, June.
- Wade K. and Hafner H. (2009) Exceptional events case study. Presented at the *Air and Waste Management Association's 102nd Annual Conference and Exhibition, Detroit, MI, June 16-19* (STI 620000-3519).
- Landreneau J.V., Ray A.E., Hafner H.R., Roberts P.T., Chan A., Jackson J.A., and Zell E. (2009) Designing an air quality monitoring network for urban centers. Training course presented at the *Curso Regional sobre Aseguramiento de la Calidad de las Mediciones de Inmisiones y Emisiones de Contaminantes de Aire Universidad Nacional, Costa Rica, March 30–April 3, 2009*, by Sonoma Technology, Inc., Petaluma, CA, and Battelle Memorial Institute, Arlington, VA (STI-908078.03).
- 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.
- 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.
- Hafner H. (2009) VOCD at training: Validating, reporting, and analyzing toxics data. Presented to the San Diego Air Pollution Control District, San Diego, CA, STI-908050-3636, June.
- Hafner H.R., Funk T.H., and Penfold B.M. (2009) Monitoring network assessments: lessons learned. Presented at the *National Air Quality Conference, Dallas, TX, March 2-5*, by Sonoma Technology, Inc., Petaluma, CA (STI-3547). Also presented at the EPA Region 5 State/Local/Tribal Contacts Meeting, Chicago, IL, April 21 (STI-3620).
- Hafner H.R. and McCarthy M.C. (2009) Summary of national air toxics data analyses - 2007. Online webinar presented on behalf of the U.S. Environmental Protection Agency, Research Triangle Park, NC, on November 6, 2008 (STI-908302-3485). Also presented to the Wyoming Dept. of Environmental Quality on March 18, 2009, by Sonoma Technology, Petaluma, CA.
- McCarthy M.C. and Hafner H.R. (2008) Relating changes in ambient concentrations to mobile source air toxics controls. Presented at the *CRC Mobile Source Air Toxics Workshop, Phoenix, AZ, December 2* by Sonoma Technology, Inc., Petaluma, CA (STI-3407).
- Hafner H.R., McCarthy M.C., and Funk T.H. (2008) Network assessment for the photochemical assessment monitoring stations (PAMS) program: A national overview. Presented at the *Air & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Chapel Hill, NC, November 3-6*, by Sonoma Technology, Inc., Petaluma, CA (STI-3409).

- McCarthy M.C. and Hafner H.R. (2008) National picture of risk-weighted concentrations of ambient air toxics. Presented at the *Air & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Chapel Hill, NC, November 3-6, 2008* by Sonoma Technology, Inc., Petaluma, CA (STI-3410).
- Hafner H.R. and Funk T.H. (2008) Southwest Wyoming air monitoring network assessment. Presented to the Southwest Wyoming Network Assessment External Advisory Committee, July 30, by Sonoma Technology, Inc., Petaluma, CA.
- Hafner H.R. (2008) National air toxics data analysis overview. Presented to the Oregon Department of Environmental Quality, Portland, OR, by Sonoma Technology, Inc., Petaluma, CA, STI-3400, June.
- Roberts P.T. and Hafner H.R. (2008) Recommendations for data reporting of uncertainty and measurement process characteristics. Presented at the *Air & Waste Management Association's 101st Annual Conference & Exhibition, Portland, OR, June 24-27* (STI-3274).
- Hafner H.R. (2008) Establishing a visibility goal for wilderness and urban areas in British Columbia and Canada. Presented on behalf of the British Columbia Ministry of Environment, Victoria, BC, Building a Visibility Roadmap for Canada, Vancouver, Canada, March 26 by Sonoma Technology, Petaluma, CA.
- McCarthy M.C., Hafner H.R., and Charrier J.G. (2007) National trends in trace metals concentrations in ambient particulate matter. Presented at the *Fall 2007 American Geophysical Union Conference, San Francisco, CA, December 14*, by Sonoma Technology, Inc., Petaluma, CA (STI-3221).
- McCarthy M.C., O'Brien T.E., and Hafner H.R. (2007) Risk and hazard characterization summary. Presented at the *Air Toxics Data Analysis Workshop, Rosemont, IL, October 4*, by Sonoma Technology, Inc., Petaluma, CA (STI-905306-3236).
- McCarthy M.C., Charrier J.C., and Hafner H.R. (2007) Trends and accountability. Presented at the *Air Toxics Data Analysis Workshop, Rosemont, IL, October 4*, by Sonoma Technology, Inc., Petaluma, CA (STI-905306-3236).
- Hafner H.R., McCarthy M.C., and Charrier J.G. (2007) Trends in ambient air toxics concentrations. Presented at the *Symposium on Air Quality Measurement Methods and Technology, Air and Waste Management Association, San Francisco, CA, May 2*, by Sonoma Technology, Inc., Petaluma, CA (STI-3110).
- McCarthy M.C., Wade K.S., and Hafner H.R. (2007) Analysis of ambient air quality after Hurricane Katrina. Presented at the *Symposium on Air Quality Measurement Methods and Technology, Air and Waste Management Association, San Francisco, CA, May 2*, by Sonoma Technology, Inc., Petaluma, CA (STI-3111).
- 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).
- McCarthy M.C., Hafner H.R., and Charrier J.G. (2007) Southeastern air toxics data collection and analysis. Presented at the *EPA Region 4, SESARM, and Metro 4 Air Toxics Summit, Atlanta, GA, February 27-28*, by Sonoma Technology, Inc., Petaluma, CA (STI-906021-3134).
- Hafner H. and Penfold B.M. (2006) An introduction to monitoring network assessment. Presented at the *National Air Monitoring Conference, Las Vegas, NV, November 6-9*, Sonoma Technology, Inc., Petaluma, CA (STI-3062).

- Sundblom M., Armijo C., and Hafner H. (2006) Joint Air Toxics Assessment Project (JATAP) for the Maricopa/Pinal urban area, Arizona. Presentation for the *EPA National Air Monitoring Conference, Las Vegas, NV, November 8*, by the Arizona Department of Environmental Quality, the Salt River Pima Maricopa Indian Community, and Sonoma Technology, Inc., Petaluma, CA.
- Penfold B.M., Hafner H., and Raffuse S. (2006) Analytical techniques used for regional-scale network assessments. Presented at the *National Air Monitoring Conference, Las Vegas, NV, November 6-9*, Sonoma Technology, Inc., Petaluma, CA (STI-3061).
- Hafner H.R. and McCarthy M.C. (2006) What is the national picture of ambient air toxics concentrations? Paper presented at the *22nd Annual National Environmental Monitoring Conference, Arlington, VA, August 28-30* (STI-2992).
- Hafner H.R., McCarthy M.C., and Chinkin L.R. (2006) National, regional, between-city, and within-city spatial variability in air toxics. Presented at the *AWMA Symposium on Air Quality Measurement Methods and Technology, Durham, NC, May 9*, by Sonoma Technology, Inc., Petaluma, CA (STI-2884).
- Hafner H.R., McCarthy M.C., and Chinkin L.R. (2006) Temporal trends in air toxics. Presented at the *AWMA Symposium on Air Quality Measurement Methods and Technology, Durham, NC, May 9*, by Sonoma Technology, Inc., Petaluma, CA (STI-2885).
- 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 (STI-905039.02-2921).
- Hafner H.R. (2006) Air quality data analysis: how monitoring data are used to answer policy-relevant questions. Presented at *Washington State University, Pullman, WA, February 13* (STI-2915).
- Hafner H.R., McCarthy M.C., and Chinkin L.R. (2005) National air toxics assessments: lessons learned in quantifying ambient air toxics temporal and spatial trends. 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-905102-2756).
- 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. 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. (2005) Identifying significant contributions to ambient fine particulate matter (PM_{2.5}) in Prince George, British Columbia. Presentation to the Ministry of Water, Land, and Air Protection, University of Northern British Columbia, Prince George, BC, by Sonoma Technology, Inc., Petaluma, CA, STI-904391-2709, March.
- 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).
- Hafner H.R., McCarthy M.C., and Roberts P.T. (2005) Using air toxics monitoring data to quantify mobile source contributions. Presented at the *Transportation Research Board 84th Annual Meeting, Workshop 124: Mobile Source Air Toxics, Washington, DC, January 9* (STI-2685).
- 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).
- 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, 2004* (STI-903555).
- Hafner H.R. and Wheeler N.J.M. (2004) What we have learned from Photochemical Assessment Monitoring Stations (PAMS). Presentation to the Annual Meeting of the West Coast Section, Air & Waste Management Association, Ventura, CA, May 13 by Sonoma Technology, Inc., Petaluma, CA, STI-2538, May.
- 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 & 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 & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Research Triangle Park, NC, April 19-22* (STI-2444).
- 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 & Waste Management Association Symposium on Air Quality Measurement Methods and Technology, Research Triangle Park, NC, April 19-22* (STI-2450).
- 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).
- Hafner H.R. (2003) VOCdat for validating, reporting, and analyzing toxics. Presented at *Joint Air Toxics Workshop sponsored by U.S. Environmental Protection Agency and Northeast States for Coordinated Air Use Management, Las Vegas, NV, October 8-9* (STI-903553-2425).
- Hafner H.R. (2003) Analysis of metals data to date: what can/does analysis indicate about sampling and/or analytical methods issues? Presented at *Joint Air Toxics Workshop sponsored by U.S. Environmental Protection Agency and Northeast States for Coordinated Air Use Management, Las Vegas, NV, October 8-9* (STI-903553-2426).
- Penfold B.M., Funk T.H., and Hafner H.R. (2003) Exploring the use of suitability modeling to locate air toxics monitors in Massachusetts. Paper and presentation prepared for the *ESRI International User Conference 2003, San Diego, CA, July 7-11* (STI-2388).
- 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 & Waste Management Association's 96th Annual Conference & Exhibition, San Diego, CA, June 22-26* (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 & Waste Management Association's 96th Annual Conference & Exhibition, San Diego, CA, June 22-26* (STI 2250).
- Hafner H.R., Hyslop N.P., and Roberts P.T. (2003) Managing and validating data from the California Regional PM₁₀/PM_{2.5} Air Quality Study. Paper and presentation prepared for the *Air & Waste Management Association's 96th Annual Conference & Exhibition, San Diego, CA, June 22-26* (STI-2255).
- Hafner H.R. (2003) VOCdat training: validating, reporting and analyzing toxics data. Presented at EPA Region V Offices, Chicago, IL, May 14-15; Research Triangle Park, NC, June 4; Albany, NY, June 10; and EPA Region IX Offices, San Francisco, CA, June 17, STI-902600-2365.
- 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. 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*.
- 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).
- 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.
- Hafner H.R., Funk T.H., Penfold B.M., and Anderson D. (2002) Assessment of the toxics monitoring network in Phoenix, Arizona. Presented at the Symposium on Air Quality Measurement Methods and Technology, San Francisco, CA, November 13, STI-901483-2232.
- Hafner H.R. and Roberts P.T. (2002) Recommendations for the PAMS network in the Northeast and Mid-Atlantic states. Presented at the Symposium on Air Quality Measurement Methods and Technology, San Francisco, CA, November 13, STI-900860-2231.
- Hafner H.R. (2002) Using MAPPER. Presentation prepared for and presented at Pima Association of Governments, Tucson, AZ, October 23 (STI-902170-2270).
- Main H.H. and Bortnick S. (2002) Temporal variability in ambient air toxics: implications to monitoring network design. Presentation at the *Coordinating Research Council (CRC) Air Toxics Modeling Workshop, Houston, TX, February 26-27* (STI-2153).
- Main H.H. (2001) PAMS analysis for southern California: characteristics of VOC data 1994-1997. Presented at the SCOS97-NARSTO Data Analysis Conference, Los Angeles, CA, February 13-15 (STI-2054).
- Main H.H. (2000) Analysis of air toxics data collected in Barrio Logan, California. Presented at the Barrio Logan Toxics Monitoring Stakeholders Meeting, September 21 (STI-900800-2011).

- Main H.H. and Roberts P.T. (2000) Review of air toxics modeling for the mid-Atlantic region. Paper presented at the *Air & Waste Management Association/Environmental Protection Agency International Symposium on Measurement of Toxic and Related Air Pollutants, Research Triangle Park, NC, September 12-14* (STI 1962).
- Main H.H. and Roberts P.T. (2000) The usefulness of PAMS VOC data: examples using data collected in the northeast, mid-Atlantic, and California. Presented at the *Air & Waste Management Association/Environmental Protection Agency International Symposium on Measurement of Toxic and Related Air Products, Research Triangle Park, NC, September 12-14* (STI 1963).
- Main H.H. (2000) Data analysis workshop: Analysis of PM and ozone data. Presented at a conference co-sponsored by Central States Air Resources Agencies Association (CENSARA), Air Pollution Training Institute (APTI), and the Environmental Protection Agency, Austin, TX, May 16-19.
- Roberts P.T. and Main H.H. (2000) Discussion of PAMS data uses, gaps, and other issues. Presented at the *STAPPA-ALAPCO PAMS Workshop, Las Vegas, NV, March 8-10* (STI-1952).
- Main H.H., Roberts P.T., MacDonald C.P., and Timin B. (1998) VOC data analyses to assist North Carolina DEQ ozone modeling. Presented at the *Measurement of Toxic and Related Air Pollutants Conference, Cary, NC, September 1-3* (STI 1826).
- Richards L.W., Main H.H., Hurwitt S.B., and Chinkin L.R. (1998) 1995 integrated monitoring study: comparison of light scattering measurements during winter months in the San Joaquin Valley. Presented at *PM_{2.5} A Fine Particle Standard, Long Beach, CA, sponsored by Air & Waste Management Association, the U.S. Environmental Protection Agency, and the U.S. Department of Energy, January 28-30* (STI-997216-1803).
- Main H.H. and Haste T.L. (1997) Data validation of PAMS auto-GC VOC data: more lessons learned. Paper presented at the *Air & Waste Management Association Measurement of Toxic and Related Air Pollutants Symposium Conference, Research Triangle Park, NC, April 29-May 1* (STI-1718).
- Main H.H., Roberts P.T., and Haste T.L. (1997) Spatial and temporal variations of PAMS VOCs in the Northeast. Paper presented at the *Air & Waste Management Association Measurement of Toxic and Related Air Pollutants Symposium Conference, Research Triangle Park, NC, April 29-May 1* (STI-1717).
- Main H.H., Haste T.L., and Roberts P.T. (1996) Preliminary analysis of 1995 VOC data in the Northeast. Presented at the *NARSTO-Northeast Data Analysis Symposium and Workshop, Norfolk, VA, December 10-12* (STI-1624).
- Main H.H., Chinkin L.R., and Roberts P.T. (1996) Analysis of VOC data in support of pollutant transport studies in Shasta County, California. In *Measurement of Toxic and Related Air Pollutants. Proceedings of an Air & Waste Management/U.S. Environmental Protection Agency International Specialty Conference, Raleigh-Durham, NC, May 7-9*, Air & Waste Management, Pittsburgh, PA, (STI-1581), pp. 67-74.
- Main H.H., Roberts P.T., Leston A.R., and Brunelli P. (1996) Data validation of PAMS auto-GC VOC data: lessons learned. In *Measurement of Toxic and Related Air Pollutants. Proceedings of an Air & Waste Management Association/U.S. Environmental Protection Agency International Specialty Conference, Raleigh-Durham, NC, May 7-9*, Air & Waste Management Association, Pittsburgh, PA, (STI-1581), pp. 59-66.
- Main H.H., Roberts P.T., Korc M.E., Coe D.L., Dye T.S., Lindsey C.G., and Reiss R. (1995) Analysis of PAMS and NARSTO-Northeast data - supporting evaluation and design of ozone control strategies: a workshop. Presented at the U.S. Environmental Protection Agency, Research Triangle Park, NC, by Sonoma Technology, Inc., Santa Rosa, CA, December 11-12, STI-94551/94581-1551-WD1, EPA WA-5-95 and WA-8-95.

- Main H.H., Roberts P.T., and Ligocki M.P. (1995) Assessing the usefulness of VOC data as indicators of change in fuel composition in the South Coast Air Basin (California). Paper No. 95-FA113C.02 presented at the *Air & Waste Management Association 88th Annual Meeting, San Antonio, TX, June 18-23* (STI-1501).
- Main H.H. and Roberts P.T. (1993) Analysis of the 1991 Lake Michigan Ozone Study (LMOS) NMOC data: spatial and temporal issues. Paper FM2-II.5 presented at the *Air & Waste Management Association Regional Photochemical Measurement and Modeling Studies Conference, San Diego, CA, November 8-12* (STI-1377).
- Main H.H. (1993) Validation of the LMOS hydrocarbon and carbonyl data. Paper presented at the *Air & Waste Management Association Regional Photochemical Measurement and Modeling Studies Conference, San Diego, CA, November 8-12*.
- Roberts P.T., Korc M.E., Main H.H., Chinkin L.R., and Lurmann F.W. (1993) Reconciliation of emission inventory and ambient data in the Lake Michigan air quality region. Paper No. 93-WP-100.05 presented at the *Air & Waste Management Association 86th Annual Meeting, Denver, CO, June 14-18*.
- Lurmann F.W. and Main H.H. (1992) Spatial and temporal variations in nonmethane organic compounds and NMOC/NO_x ratios. Paper presented at the *SCAQS Data Analysis Conference, University of California, Los Angeles, CA, July 21-23, VIP-26*.
- Main H.H. (1992) Validation of SCAQS hydrocarbon and carbonyl data. Paper presented at the *SCAQS Data Analysis Conference, University of California, Los Angeles, CA, July 21-23, VIP-26*.
- Main H.H. and Lurmann F.W. (1992) Ambient versus emission inventory NMOC speciation during the SCAQS. Paper presented at the *SCAQS Data Analysis Conference, University of California, Los Angeles, CA, July 21-23, VIP-26*.
- Roberts P.T. and Main H.H. (1992) Characterization of three-dimensional air quality during the SCAQS. Paper presented at the *SCAQS Data Analysis Conference, University of California, Los Angeles, CA, July 21-23, STI-1223*. In *Southern California Air Quality Study Data Analysis*, Air & Waste Management Association, Pittsburgh, PA, VIP-26.
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