

Eben D. Thoma, Physical Scientist in EPA's National Risk Management Research Laboratory

Air and Energy Management Division

[Mailing Address](#)

Thoma.Eben@epa.gov

Area of Expertise:

ORD technical expert for fugitive and area source air pollution. ORD lead for Next Generation Emission Measurement (NGEM) program. Specializes in development and application of air pollutant emissions measurement technologies for the public good. Focuses on improving information on difficult-to-measure air pollutant sources where emissions, management strategies, and community impacts are uncertain. Assists EPA Program Offices in evaluation and development of new regulatory and compliance strategies for critical emerging source categories, such as oil and gas production. Through cooperative research and development agreements (CRADAs) with industry, leads teams to put NGEM approaches to work to create safer working environments, reduce near-source impacts, and save companies money.

Select Publications:

Thoma, E.D., Deshmukh, P., Logan, R., Stovern, M., Dresser, C., Brantley, H.L., 2017.

[Assessment of Uinta Basin oil and natural gas well pad pneumatic controller emissions](#). *Journal of Environmental Protection*, 8, 394-415.

Oliver, K.D., Cousett, T.A., Whitaker, D.A., Smith, L.A., Mukerjee, S., Stallings, C., **Thoma, E.D.**, Alston, L., Colon, M., 2017. [Sample integrity evaluation and EPA method 325B interlaboratory comparison for select volatile organic compounds collected diffusively on Carbopack X sorbent tubes](#). *Atmospheric Environment*, 163, 99-106.

Thoma, E.D., Brantley, H.L., Oliver, K.D., Whitaker, D.A., Mukerjee, S., Mitchell, B., Squier, B., Wu, T., Escobar, E., Cousett, T.A., Gross-Davis, C.A., Schmidt, H., Sosna, D., Weiss H., 2016. [South Philadelphia passive sampler and sensor study](#). *Journal of the Air & Waste Management Association*, 66 (10), 959-970.

Mukerjee, S., Smith, L., **Thoma, E.D.**, Oliver, K., Whitaker, D., Wu, T., Colon, M., Alston, L., Cousett, T., Stallings, C., 2016. [Spatial analysis of volatile organic compounds in South Philadelphia using passive samplers](#). *Journal of the Air & Waste Management Association*, 66 (5), 492-498.

Albertson, J.D., Harvey, T.A., Foderaro, G., Zhu, P., Zhou, X., Ferrari, S., Amin, S., Modrak, M., Brantley, H.L., **Thoma, E.D.**, 2016. [A mobile sensing approach for regional surveillance of fugitive methane emissions in oil and gas production](#). *Environmental Science & Technology*, 50 (5), 2487-2497.

Eisele, A.P., Mukerjee, S., Smith, L.A., **Thoma, E.D.**, Whitaker, D., Oliver, K., Wu, T., Colon, M., Alston, L., Cousett, T., Miller, M.C., Smith, D.M., Stallings, C., 2016.

[at oil and natural gas production well pads in Colorado and Texas using passive samplers.](#)
Journal of the Air & Waste Management Association, 66 (4):412-419.

View more publications by [Eben Thoma](#).

Education:

- Ph.D., Wake Forest University, Winston-Salem, NC; Physics, 1997
- B.S., University of North Carolina Asheville; Physics, 1991

Professional Experience:

Workgroup and Project Leads

- ORD Air and Energy Program Team Lead and Principle Investigator, Development and application of next generation emission measurement technologies; 2014 to present
- ORD Team Lead and Principle Investigator, Oil and gas production air pollutant emission research; 2010 to present
- ORD Team Lead and Principle Investigator, Development of industrial fenceline monitoring strategies; 2008 to present
- Principle Investigator on multiple cooperative research and development agreements with industry to explore environmental and business advantages of NGEM
- Principle Investigator and team lead on multiple collaborative research efforts supporting the needs of EPA Program Offices, EPA Region and U.S. States
- Contributor to multiple technical workgroups and technical advisory panels supporting the needs of international regulatory bodies, NGOs, state and local organizations, and U.S. government research centers
- Six years as private sector senior/project Engineer for fortune 500 consumer products and laser technology companies. Led instrumentation development teams impacting flagship product lines. Supervised advanced instrumentation and product analysis laboratory Initiated and directed external research programs (1997-2003)

Awards and Recognition

- EPA Russell Train Sustainability Award Next Gen Advanced Monitoring Field Advancements, 2018
- EPA OAR Award for Distinguished Service for Refinery Rule Development, 2016
- EPA Science Achievement Award for Air Quality, 2014
- EPA Regulatory Office Bronze Medal, Oil and Gas Support to Office, 2014
- U.S. Patent # US8445850 B2, Optical Remote Sensing of Fugitive Releases, 2013
- EPA Regulatory Office Bronze Medal, GMAP Next Gen. Measure Approaches, 2013
- EPA Program Office Assistance Award, Fenceline Monitoring RTR Rule, 2011
- EPA Scientific and Technological Achievement Award, Mobile Source Impacts, 2010
- EPA ORD NRMRL Honor Award for Quality Assurance, 2010

[Science Matters: Fenceline Monitoring](#)

[Science Matters: Tracking Emissions Using New Fenceline Monitoring Technology](#)