

Lee Riddick, Environmental Specialist, in EPA's National Exposure Research Laboratory

Systems Exposure Division

[Mailing Address](#)

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Area of Expertise: I am interested in the way we calculate and report emissions, and in understanding and characterizing the differences between bottom-up inventories derived from source and near source measurements, and top-down emissions estimates derived from ambient measurements. I'm also interested in organizational systems and in assisting different groups with diverse needs and goals to work together to meet overarching goals. I enjoy making connections that result in broad and impactful collaborations, and am currently learning how to develop and roll-out tools that EPA can use to inform and engage the public.

Select Publications:

Development of a solid phase extraction method for agricultural pesticides in large-volume water samples; GM Momplaisir, CG Rosal, EM Heithmar, KE Varner, LA Riddick; Bradford DF, NG Talent-Halsell; Talanta 81 (4), 1380-1386, 2010.

Temporal patterns and sources of atmospherically deposited pesticides in alpine lakes of the Sierra Nevada, California, USA; DF Bradford, EM Heithmar, NG Tallent-Halsell, GM Momplaisir, CG Rosal, KE Varner, MS Nash, LA Riddick; Environmental Science & Technology 44 (12), 4609-4614, 2010.

Macro-and Micro-Purge Soil-Gas Sampling Methods for the Collection of Contaminant Vapors; BA Schumacher, JH Zimmerman, CR Sibert, KE Varner, LA Riddick; Groundwater Monitoring & Remediation 29 (1), 138-143, 2009.

View more research publications by [Lee Riddick](#).

Education:

- BS Chemistry, UNLV – Minor in Biology

Professional Experience:

- ORD/NERL/SED/EHCAB (current)
 - Promote web-based tools
 - Leading project that seeks to use existing data to improve emission factors
- ORD/IOAA/ACE – Science Associate (detail April 2014 – April 2015)
 - Partner with OAR/Regions to develop solutions for emission inventories and emission factors – Assembled a cross-Agency emissions steering committee to assess the complex issues involving multiple facets of EPA's emissions inventory

and emissions factor programs, beginning with the Oil and Gas sector. Emissions from the Oil and Gas sector are poorly characterized and are a major contributor to air pollution that causes climate change (Greenhouse Gases, GHGs) and negative impacts to human health and the environment.

- Outreach to Regions – Established regular exchanges between ORD scientists and Regional sublead groups to facilitate better partnerships for solving environmental problems. Interacted with air division directors and managers in regions and OAR to exchange information and better define ORD's support.
- ORD/NERL/RPCS – Peer Review Coordinator, GPRA, TIMS, Facilitator, Interim ACE MI (November 2008 – April 2014)
- ORD/NERL/ESD – POS Director (June 2007 – November 2008)
 - Supervisory Leadership and Management of: division budget planning and implementation, all aspects of facilities management, negotiations with lessor (UNLV owned buildings), safety health and environmental management, security, information technology, human resources, labor relations, accountability, management integrity, acquisitions and contracts, policies and procedures, records management, FOIA requests.
- ORD/NERL/ESD – Research Chemist (1997 – 2007)
 - Served on division science council. Monitored two technical SEE employees. Successfully submitted a project to the NNEMS fellowship program and mentored the fellow to completion of the project. Served on detail as ESD Health and Safety Manager.
 - Research examples: Developed extraction and analysis method for organotins using capillary electrophoresis (CE) for Office of Solid Waste. Conducted and published research predicting phototoxicity of PAH's using computational methods. Developed low level extraction and analytical methods for a suite of agricultural herbicides and pesticides using large volume extraction and GC/MS as part of an interdisciplinary team. The method was used to track the movement and deposition of pesticides from the application site to pristine alpine lakes in the Sierra Nevada Mountains where endangered frog populations were experiencing high mortality. Developed a published method for analysis of volatiles and semi-volatiles in drinking water by microextraction and thermal desorption.

Honors and Awards:

- 2013 Level II STAA
- 2011 NERL Teamwork
- 2010 Bronze Medal
- 2007 Honorable Mention STAA