

Technical Review Workgroup (TRW) – Lead (Pb) 2023 Accomplishments

The Lead TRW's goal is to develop, maintain, support, and promote consistent application and improvement of the best science in the field of human health risk assessment for lead (Pb) and other metals.

Technical Support

One of the fundamental roles and responsibilities of the Lead TRW is to provide technical support to state, federal, tribal, non-governmental and international groups regarding the application of lead risk assessment tools. Furthermore, the Lead TRW promotes the application of best use of available scientific information concerning human health risk assessment methods in soil and soil-like (e.g., floodplains) media at affected sites.

The Lead TRW members are technically diverse, experienced and highly trained professionals in lead risk assessment who provide expert assistance in sometimes complex risk assessment scenarios.

The Lead TRW responded to 61 hotline (pbhelp@epa.gov) requests from state, federal, non-governmental and international sources. Requests were received from the following groups:

- 34 requests were from state and federal agencies;
- 1 was from outside the US; and
- 14 requests were from other sources (public, non-governmental organizations, engineering and consulting firms, and academia).

The majority of the requests pertained to the Integrated Exposure Uptake Biokinetic (IEUBK) model for lead in children), including installation and use, exposure scenarios, soil/dust and air concentrations, or guidance-related questions. Almost 15 percent of the requests pertained to the Adult Lead Methodology. The remainder of the requests were questions regarding topics ranging from soil amendments to lead-based paint, sieving, In-Vitro Bioaccessibility (IVBA)-adjusted lead concentrations, soil/dust ratios, and source attribution.

Communication, Training and Outreach

In August 2023, the Training Subcommittee gave a presentation regarding the IEUBK and ALM to community involvement coordinators (CICs). The training emphasized increased collaboration between regional risk assessors and CICs on lead messaging strategies.

In November 2023, the Lead TRW and TRW for Bioavailability held a hybrid meeting at EPA's Office of Research and Development's Gulf Ecosystem Measurement and Modeling Division Laboratory in Gulf Breeze, Florida. The meeting discussed topics from the updated *Superfund Residential Lead Sites-Handbook* that may result in documents such as FAQs, short sheets or guidance, training needs for new risk assessors and non-risk assessors, complex Superfund site issues, and a technical discussion and demonstration of the All Ages Lead Model (AALM) regarding interpreting short-term exposure

scenarios. ATSDR discussed incorporating social vulnerability in ongoing work with communities and EPA at lead – contaminated sites.

Guidance Documents (Completed and Active Projects)

In support of updating the Office of Superfund Remediation and Technology Innovation's 2003 *Superfund Residential Lead Sites-Handbook*, the Lead TRW completed revisions to sampling and risk assessment chapters and responded to comments resulting from regional review.

The Lead TRW continues its ongoing support to provide site information and beta testing of the EPA's Office of Research and Development's All Ages Lead Model (AALM). In August 2020, the Agency received the final peer review report on the external draft of the version 2.0 of the AALM. The AALM version 3.0 has been cleared through ORD's clearance process for public release. Version 3.0 addresses Tier 1 (recommended revisions) and some Tier 2 (suggestions) SAB peer review comments. It is anticipated that the AALM v3.0 will become publicly available Spring 2024. A respiratory module is undergoing a separate peer review and will be added in FY2025. The development of the draft AALM tool is an outgrowth of the IEUBK. It can evaluate lead exposure from birth to 90 years of age and allows for the assessment of intermittent exposures as short as one day, a limitation of the IEUBK and ALM.

The Lead TRW drafted *Assessing Intermittent or Variable Exposure at Lead Sites* which updates the current guidance regarding the evaluation of non-continuous exposure to communities. The document will be finalized in Spring 2024 and expands on the following:

- Track-in of soil to residences from other locations;
- Exposures at more than one location such as daycare outside primary residence, recreation areas, etc.;
- Non-continuous air exposure.

The Lead TRW drafted *Area-Wide Average Approach to Implementing Cleanup Goals at Lead Sites*. The document describes sampling and remediation strategies in support of risk assessment and risk management with the emphasis of implementing the resulting risk - based cleanup goal for an exposure area. The area-wide averaging (AWA) approach to remediation provides the option to risk managers at sites to address lead contamination such that the average (for lead, and upper confidence limit for the average for other contaminants) concentration of contaminants in an exposure unit remaining after remediation is at or below the cleanup goal, whereas a not-to-exceed (NTE) approach typically remediates all decision units within an exposure unit with soil concentrations exceeding the cleanup goal. The document describes the data needs and pros and cons of several alternative approaches that risk managers may consider in addition to NTE cleanup. The document will be finalized Summer 2024.

**Technical Review Workgroup for Metals and Asbestos
Lead Committee**

Full Members

Region 1

Mary Ballew
Courtney Carroll (co-chair)

Office of Research and Development (ORD)

James Brown
Kirk Scheckel

Region 2

Julie McPherson
Abbey States

**Office of Superfund Remediation and Technology
Innovation (OSRTI)**

Michele Burgess (co-chair)
Matt Lambert

Region 3

Linda Watson

Environmental Response Team

Kelly O'Neal

Region 4

Ayana Cunningham
Kevin Koporec

Utah Department of Environmental Quality

Scott Everett

Region 5

Keith Fusinski

**Agency for Toxic Substances and Disease Registry
(ATSDR)**

Steve Jones

Region 6

Ghassan Khoury

Region 7

Ann Jacobs

Region 8

Charles Partridge (co-chair)

Region 9

Harry Beller
Jocelyn Pierro

Region 10

Marc Stifelman