Jonathan J. Heywood, MPH
Senior Associate Toxicologist

Paustenbach and Associates
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Education and Degrees Earned

- Master's of Public Health, Environmental and Occupational Health, University of Colorado, 2018
- Bachelor's of Science, Wildlife Ecology and Conservation, University of Nevada, Reno, 2016

Experience Summary (Professional Career)

Paustenbach and Associates
Senior Associate Toxicologist
Jackson, Wyoming
February 2021 – Present

- Consultant in toxicology, occupational health, industrial hygiene, exposure assessment, state of the art, and safety.
- Currently focused on asbestos, e-cigarettes (vaping), and environmental toxicology (various topics).
- Involved in litigation work, interpreting toxicological studies, conducting exposure assessments, assessing mathematical models for dose-response curves, and characterizing risks posed by chemicals in environmental and occupational scenarios.

Cardno ChemRisk
Senior Associate Toxicologist
Boulder, Colorado
June 2018 – February 2021

- Consultant in exposure assessment, toxicology, industrial hygiene, state of the art, and risk mitigation.
- Experience with occupational and non-occupational exposures to e-cigarette (vaping) substituents; asbestos; talc; benzene; diesel exhaust, fumes, and soot; creosote; diacetyl; ethylene oxide; peracetic acid; herbicides; silica; and various components of personal care products including cosmetics, shampoos, and sunscreens.
- Project management experience for various asbestos, state of the art, and person most

knowledgeable clients, along with extensive litigation support experience.
- Contribution to ongoing consulting related to risk mitigation policies associated with occupational environments and Covid-19.

National Environmental Health Association
Intern
Denver, Colorado
May 2017 – May 2018

- Conducted an assessment of the utility of CDC's Model Aquatic Health Code (MAHC) on improving the safety of public recreational water environments such as pools, spas, and waterparks.
- Developed and implemented a dual approach quantitative/qualitative study to assess the influence of the MAHC on health outcomes and analyzed subsequent data.

Colorado School of Public Health
Graduate Student Researcher
Aurora, Colorado
November 2016 – August 2017

- Was part of a research group that examined noise and air pollution (primarily BTEX compounds) produced from unconventional oil and gas development (fracking) in close proximity to residential communities.
- Examined the literature regarding health effects associated with noise and pollution exposures at measured levels.
- Communicated findings with community members and other stakeholders.

Key Projects (Partial List)

1. **Assessment of occupational and non-occupational asbestos exposures and potential for such exposures to yield health effects.** Various claims associated with exposure to allegedly asbestos-containing products including insulation, transite, gaskets, packing, clutches, brakes, and electrical components, among other materials. Assisted with exposure assessment to examine the potential for given product(s) to yield health effects at exposure levels likely experienced by users and/or bystanders (2018-2021).

2. **Evaluation of exposures associated with railroad environments and potential for health effects following work in such environments.** Claims associated with exposures in rail yard and track/road environments experienced by individuals in various railroad trades. Assisted with assessment of exposure to asbestos, diesel and its substituents, creosote, benzene, herbicides, and silica, among other compounds, and potential for likely exposure levels to yield disease (2019-2021).

3. **Examination of non-occupational talc exposures and potential for development of exposure-associated health effects.** Claims associated with non-occupational use of talc for cosmetic and/or hygiene purposes were examined. Literature examining exposure

from simulated scenarios was used to inform opinions regarding potential for exposure to cause alleged health outcomes (2018-2021).

4. **Analysis of various e-cigarette substituents for potential health effects at exposure levels commonly associated with vaping.** Various e-cigarette flavoring components were examined for toxicological risk. Where minimal data was available for given compound(s), QSAR was used to approximate toxicological potential (2019-2021).

5. **Health assessment of a community influenced by substantial transportation development.** Assisted with development of a health assessment to be conducted in a community where a large-scale transportation development was taking place. The assessment is ongoing and aims to quantify negative health effects associated with transportation development and propose mitigation strategies to be implemented by state and local health organizations (2020-2021).

6. **Examination of the toxicological risks posed by prior cargoes in vessels transporting food-grade products.** Quantified the risks of various prior cargoes in trans-oceanic shipping containers subsequently used to transport food products. Assisted with literature review and, where necessary, QSAR examination of prior cargoes for potential toxicological risks, and compared likely exposure levels from vessel contamination to U.S. and internationally published exposure guidelines (2020).

7. **Analysis of the efficacy and health risks of EPA List N disinfectants for use to mitigate the spread of Covid-19.** Performed a preliminary analysis of potential human health risks associated with routine use of disinfectants incorporated on EPA List N relative to published guidelines for use magnitude and information concerning health risks (2021).

8. **Evaluation of the ecotoxicological risks posed by a client's products relative to contemporary state of the science information for product substituents.** Based on historical corporate records, compared client knowledge of the ecotoxicological risks posed by compounds incorporated in client products to contemporary state of the science regarding such compounds. Allegations of client disregard for contemporary scientific knowledge at time of production were compared to the broader literature (2018).

Professional Honors/Awards

- Deans List, University of Nevada, Reno, 2014-2016
- National Science Foundation EPSCoR UROP – 2015-2016 Annual Scholarship

Membership in Professional Societies

- The Wildlife Society