



## Publication

# Indoor air background levels of volatile organic compounds and air-phase petroleum hydrocarbons in office buildings and schools

[Richard Rago](#), Senior Associate at Haley & Aldrich, is the lead author of a new article in *Groundwater Monitoring & Remediation*, “Indoor air background levels of volatile organic compounds and air-phase petroleum hydrocarbons in office buildings and schools.” Rich partnered with Andy Rezendes of Alpha Analytical to develop and implement the study, which included collaboration with Haley & Aldrich experts [Jay Peters](#), [Kelly Chatterton](#), and [Arun Kammari](#), and technical review and support from [Gina Plantz](#).

U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection provided input on the anonymous study’s design, which included the collection of 25 school building samples and 61 office building samples. The study generated 14,668 new indoor air background data points, with samples collected from buildings located in 26 cities in 18 states (Arizona, California, Connecticut, Indiana, Kansas, Maine, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, Nevada, North Carolina, Ohio, Texas, Utah, and Washington). The study identified some volatile organic compounds (VOCs) ubiquitously in indoor air background, and some at concentrations which exceeded risk-based regulatory screening levels. These study results provide useful and updated information on indoor air background and [air quality](#) in offices and schools.- The results can be used in future regulatory guidance considerations, for further examination of relationships between these data and residential indoor air background, in human health [risk assessments](#) and risk communications, and in planning future studies.

Learn more by [downloading the paper](#) or by clicking the “Read now” button below. To understand how this might be applicable to your sites, please contact any of our [vapor intrusion](#) experts listed above in the first paragraph.

Read now