

## Residential oil boilers raise health concerns for Northeastern U.S.

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Residential oil boilers, such as the one shown above, are used frequently to heat homes in New England. A recent study suggests more attention should be paid to their emissions, which could cause asthma and other health problems. Credit: Courtesy of Roger McDonald, Brookhaven National Laboratory

New research suggests that residential oil boilers, commonly used for home heating in the northeastern United States, should receive more attention as sources of air pollutants. The study — the first to identify certain specific air pollutants in home heating oil emissions — is scheduled for the April 1 issue of ACS' *Environmental Science & Technology*.

Homes in the New England and Central Atlantic States consume about 80 percent of the 25 billion gallons of home heating oil burned in the United States. Scientists have been aware of potential public health effects of those emissions. However, there has been little specific information about the nature of the emissions.

Michael D. Hays and colleagues tackled that knowledge gap in their new study, which aimed to obtain improved or missing pollutant information for the popular home heating source. Among the substances of concern identified in the study were fine particulate matter known to cause asthma, bronchitis, and other health problems. “The residential oil burner is a source of numerous hazardous air pollutants and ultrafine particles and, hence, may warrant more attention in the future than it has received so far,” say the authors.

The research was conducted as part of a long-term national research program designed to better characterize particulate matter and its chemical precursors. The results are used to improve source emissions inventories and support efforts to determine how specific sources contribute to pollutant concentrations measured in the atmosphere.

Source: ACS

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