



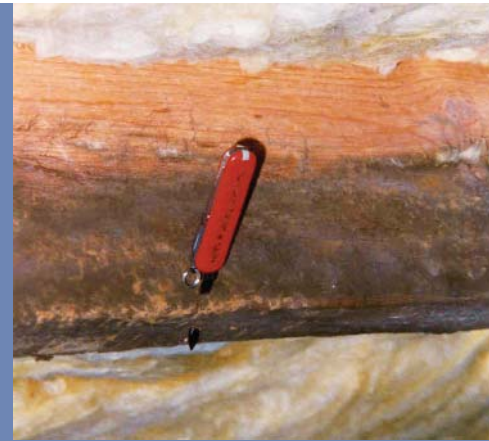
# High Performance Homes

energy and moisture performance  
of closed crawl spaces

E A S T E R N N O R T H C A R O L I N A

## The Problem

Warm, moist air entering vented crawl spaces and condensing on cool surfaces, resulting in moisture accumulation.



## The Research

Twelve identical houses divided into three matched pair groups to compare the moisture and energy performance of vented versus closed crawl spaces.



vented  
R19 floor insulation



closed  
R19 floor insulation



closed  
2" foam wall insulation



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### Results

Properly closed crawl spaces are more energy efficient and substantially drier than well constructed, code compliant, vented crawl spaces.

### Other Research Partners and Sponsors

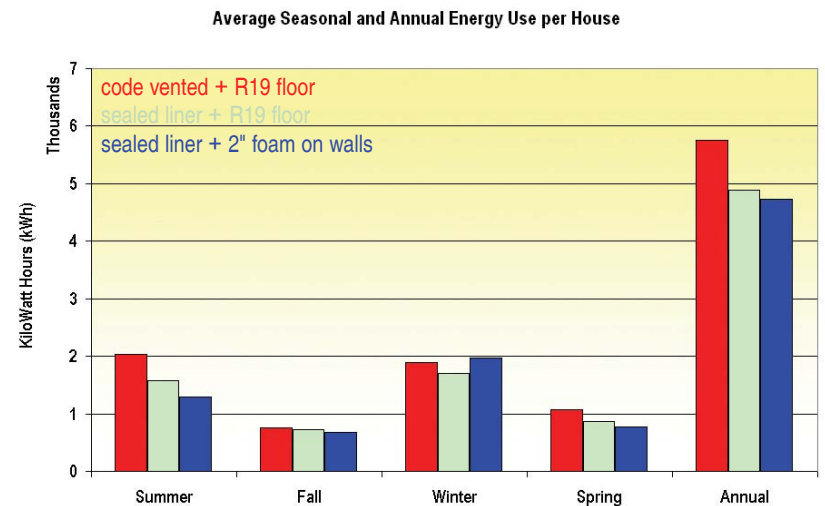
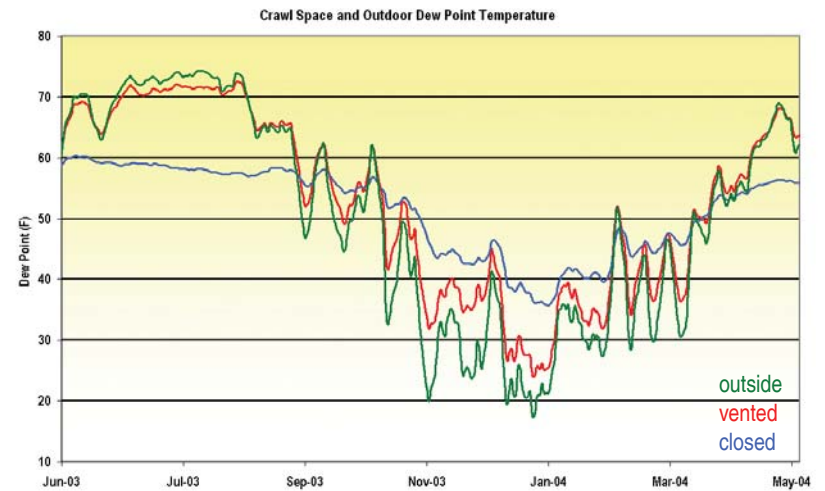
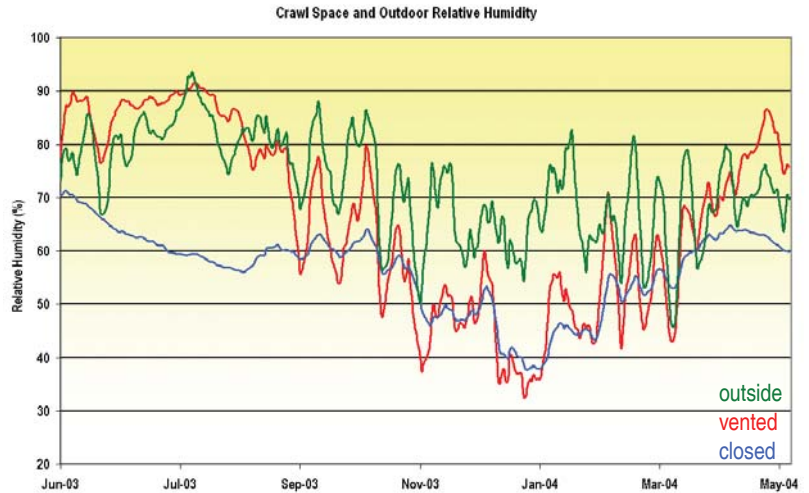
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- U.S. Department of Energy
- U.S. Department of Housing and Urban Development
- U.S. Environmental Protection Agency

For more information about the crawl space research project, visit [www.crawlspaces.org](http://www.crawlspaces.org).

Cyrus Dastur, Crawl Space Research Project Manager  
 Bruce Davis, Research Director

Advanced Energy is a Raleigh, N.C., based corporation that serves as a state and national resource to help utility, industrial and residential customers improve the return on their energy investment. Its mission is to create economic and environmental benefits through innovative approaches to energy.

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Savings	Closed with R-19 floor	Closed with R-13 wall
Summer	-22%	-36%
Fall	-5%	-10%
Winter	-10%	+4%
Spring	-19%	-28%
<b>Annual</b>	<b>-15%</b>	<b>-18%</b>